

# STIC Search Report

## EIC 1700

STIC Database Tracking Number: 172537

**TO: Sandra Poulos**  
**Location: REM 10D18**  
**Art Unit : 1714**  
**November 30, 2005**

**Case Serial Number: 10/706196**

**From: Mei Huang**  
**Location: EIC 1700**  
**REMSSEN 4B28**  
**Phone: 571/272-3952**  
**Mei.huang@uspto.gov**

### Search Notes

Examiner Poulos,

- 28 answers retrieved for claim 1, see p 6-81.
- 4 answers retrieved for claims 3-4, see p 82-99.
- 2 answers retrieved for claim 5, see p 100-105. Both are from the applicant.
- 5 answers retrieved for the adhesive resin having the ring of C3N3, p110-129.
- No answers retrieved for the adhesive resins specified in claims 6-22. See page 4 and 5.

If you have any questions or if you would like to refine the search query, please feel free to contact me.

Thank you for using STIC services!

Mei Huang



**Mellerson, Kendra**

172537

**From:** "Sandra Poulos" [sandra.poulos@uspto.gov]  
**Sent:** Monday, November 28, 2005 8:03 AM  
**To:** STIC-EIC1700  
**Subject:** Database Search Request

**Requester:**  
Sandra Poulos (TC1700)  
**Art Unit:**  
1714  
**Employee Number:**  
81697  
**Office Location:**  
REM 10D18  
**Phone Number:**  
571-272-6428  
**Mailbox Number:**

SCIENTIFIC REFERENCE BR  
Sci & Tech Inf - Cnt

NOV 28 2005

Pat. & T.M. Office

**Case serial number:**  
10706196  
**Class / Subclass(es):**  
524/284  
**Earliest Priority Filing Date:**  
11/12/2003  
**Format preferred for results:**  
Paper  
**Search Topic Information:**  
  
**Special Instructions and Other Comments:**  
Please search all claims.



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SERIAL NUMBER 10/706,196	FILING DATE 11/12/2003  RULE	CLASS 524	GROUP ART UNIT 1714	ATTORNEY DOCKET NO. 27702/38512
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**\*\* CONTINUING DATA \*\*\*\*\***

This application is a CIP of 10/434,616 05/09/2003 PAT 6,858,664  
 and is a CIP of 10/435,212 05/09/2003 PAT 6,969,737  
 and said 10/434,616 05/09/2003  
 is a CIP of 10/301,770 11/21/2002 ABN  
 which is a CIP of 10/144,229 05/10/2002 PAT 6,884,832

**\*\* FOREIGN APPLICATIONS \*\*\*\*\***

IF REQUIRED, FOREIGN FILING LICENSE GRANTED \*\* SMALL ENTITY \*\*  
 \*\* 02/10/2004

Foreign Priority claimed <input type="checkbox"/> yes <input type="checkbox"/> no	STATE OR COUNTRY IL	SHEETS DRAWING 0	TOTAL CLAIMS 58	INDEPENDENT CLAIMS 2
35 USC 119 (a-d) conditions met <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> Met after Allowance	Verified and Acknowledged	Examiner's Signature	Initials	

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TITLE  
 Adhesion promoters for cord-reinforced thermoplastic polymeric materials and substrate/thermoplastic polymeric material composites

**ABSTRACT**

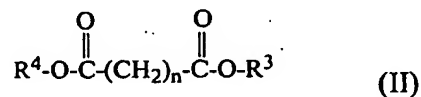
A thermoplastic polymeric material composition comprising a thermoplastic polymeric material selected from the group consisting of a thermoplastic polymer and a thermoplastic polymer alloy, an adhesive resin, and a long chain ester, particularly dimerate and trimerate esters, is capable of unexpected adhesion to substrates such as natural fabric substrates, synthetic polymeric fabric substrates, metal substrates, and thermoplastic polymeric material substrates, particularly natural cords, synthetic polymeric cords, metal cords, and glass cords for use in cord-reinforced articles such as hoses, conveyor belts, transmission belts, and the like.

WHAT IS CLAIMED IS:*Composition*

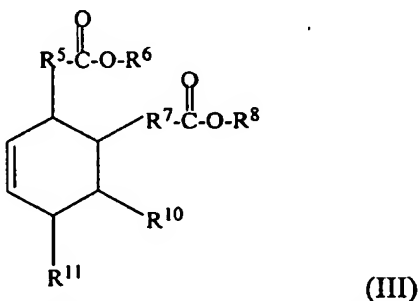
1. A thermoplastic polymeric material composition comprising a thermoplastic polymeric material selected from the group consisting of thermoplastic polymers, thermoplastic polymer alloys, and combinations thereof; and an adhesion promoter containing (1) an adhesive resin in an amount of about 0.1% to about 15% by weight, based on the weight of the thermoplastic polymeric material in the composition; and (2) an ester having formula I, II, III, IV or a combination of any two or more of said esters in an amount of about 0.1% to about 15% by weight, based on the weight of the thermoplastic polymeric material in the composition:



wherein  $\text{R}^1$  is a  $\text{C}_3\text{-C}_{24}$  alkyl radical, straight chain or branched, saturated or unsaturated containing 1 to 3 carbon-to-carbon double bonds;  $\text{R}^2$  is a  $\text{C}_3\text{-C}_{24}$  saturated fatty acid residue, or an unsaturated fatty acid residue having 1 to 6 carbon-to-carbon double bonds;



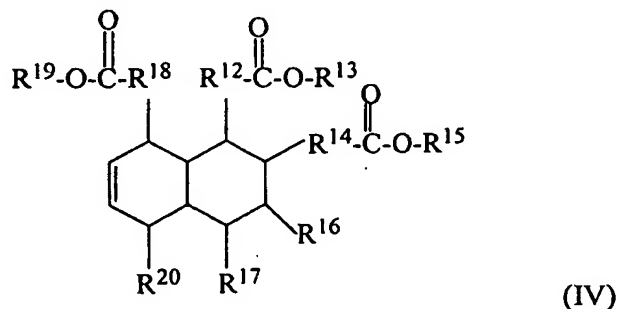
wherein  $n=3\text{-}24$ , and  $\text{R}^3$  and  $\text{R}^4$ , same or different, are a  $\text{C}_3\text{-C}_{24}$  alkyl radical, straight chain or branched, saturated or unsaturated containing 1 to 3 carbon-to-carbon double bonds;



wherein  $\text{R}^5$  and  $\text{R}^7$ , same or different, are a  $\text{C}_3\text{-C}_{24}$  hydrocarbon chain, straight chain or branched, either saturated or having 1 to 6 carbon-to-carbon double bonds;

$\text{R}^6$  and  $\text{R}^8$ , same or different, are  $\text{C}_3\text{-C}_{24}$  alkyl radical, straight chain or branched, saturated or unsaturated containing 1 to 3 carbon-to-carbon double bonds; and

$R^{10}$  and  $R^{11}$ , same or different, are a  $C_3$ - $C_{24}$ , saturated hydrocarbon chain, straight chain or branched; or an unsaturated  $C_3$ - $C_{24}$ , hydrocarbon chain, straight chain or branched, having 1 to 6, carbon-to-carbon double bonds;

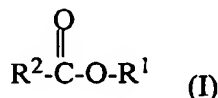


wherein  $R^{12}$ ,  $R^{14}$  and  $R^{18}$ , same or different, are a  $C_3$ - $C_{24}$  hydrocarbon chain, straight chain or branched, either saturated or having 1 to 6 carbon-to-carbon double bonds;

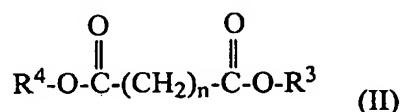
$R^{13}$ ,  $R^{15}$  and  $R^{19}$ , same or different, are a  $C_3$ - $C_{24}$  alkyl, straight chain or branched, saturated or unsaturated containing 1 to 3 carbon-to-carbon double bonds; and

$R^{16}$ ,  $R^{17}$  and  $R^{20}$ , same or different, are a  $C_3$ - $C_{24}$  saturated hydrocarbon chain, straight chain or branched; or unsaturated  $C_3$ - $C_{24}$  hydrocarbon chain, straight chain or branched, containing 1 to 6 carbon-to-carbon double bonds.

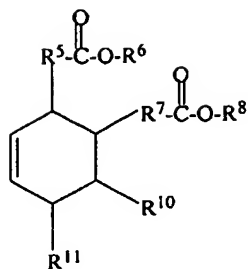
2. A thermoplastic polymeric material composition in accordance with claim 1, wherein the ester is selected from the group consisting of formula I, II, III, IV, and a combination of any two or more of said esters:



wherein  $R^1$  is a  $C_3$ - $C_{18}$  alkyl radical, straight chain or branched, saturated or unsaturated containing 1 to 3 carbon-to-carbon double bonds; and  $R^2$  is a  $C_8$ - $C_{18}$  saturated fatty acid residue, or an unsaturated fatty acid residue having 1 to 3 carbon-to-carbon double bonds;



wherein  $n=6-18$ , and  $R^3$  and  $R^4$ , same or different, are a  $C_3$ - $C_{18}$  alkyl radical, straight chain or branched, saturated or unsaturated containing 1 to 3 carbon-to-carbon double bonds;

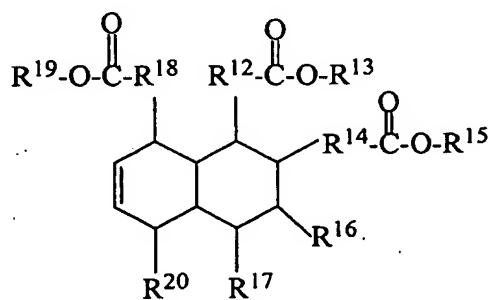


(III)

wherein  $R^5$  and  $R^7$ , are a  $C_6$ - $C_{24}$  hydrocarbon chain, straight chain or branched; either saturated or having 1 to 3 carbon-to-carbon double bonds;

$R^6$  and  $R^8$ , same or different, are a  $C_3$ - $C_{18}$  alkyl radical, straight chain or branched, saturated or unsaturated containing 1 to 3 carbon-to-carbon double bonds; and

$R^{10}$  and  $R^{11}$ , same or different, are a  $C_3$ - $C_{18}$ , saturated hydrocarbon chain, straight chain or branched; or an unsaturated hydrocarbon chain, straight chain or branched, containing 1 to 3 carbon-to-carbon double bonds;



(IV)

wherein  $R^{12}$ ,  $R^{14}$  and  $R^{18}$ , same or different, are a  $C_8$ - $C_{18}$ , hydrocarbon chain, straight chain or branched, either saturated or having 1 to 3 carbon-to-carbon double bonds;

$R^{13}$ ,  $R^{15}$  and  $R^{19}$ , same or different, are a  $C_6$ - $C_{18}$  alkyl radical, straight chain or branched, saturated or unsaturated containing 1 to 3 carbon-to-carbon double bonds; and

$R^{16}$ ,  $R^{17}$  and  $R^{20}$ , same or different, are a  $C_6$ - $C_{18}$  saturated hydrocarbon chain, straight chain or branched; or an unsaturated  $C_6$ - $C_{18}$  hydrocarbon chain, straight chain or branched, containing 1 to 3 carbon-to-carbon double bonds.

3. The composition of claim 1, wherein the adhesive resin is a condensation product of a methylene acceptor and a methylene donor. 3/1

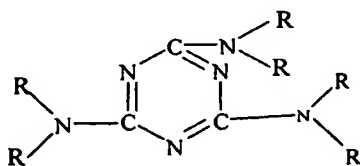
4. The composition of claim 3, wherein the adhesive resin is selected from the group consisting of phenol-formaldehyde, melamine-formaldehyde; naphthol-formaldehyde; polyepoxide; a reaction product of triallyl cyanurate, resorcinol, and formaldehyde; a reaction product of p-chlorophenol, resorcinol, and formaldehyde; a copolymer of styrene, butadiene, and 2-vinylpyridine; and mixtures thereof. 4/3

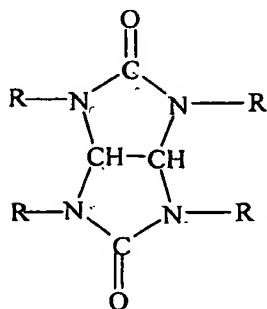
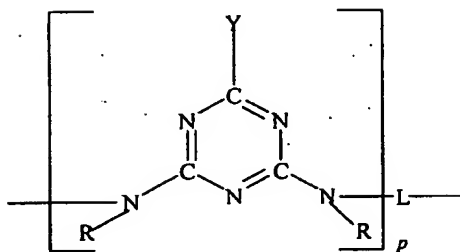
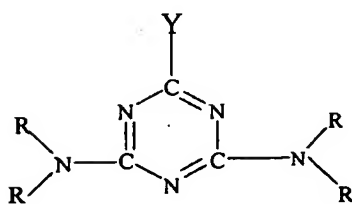
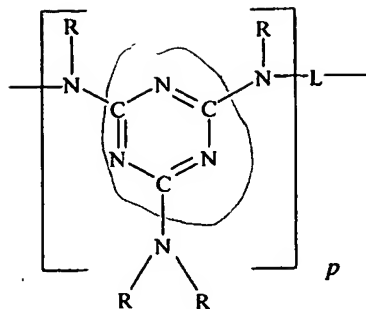
5. The composition of claim 4, wherein the phenol-formaldehyde resin is resorcinol-formaldehyde. 5/4

6. The composition of claim 1, wherein the adhesive resin is selected from the group consisting of derivatives of melamine, acetoguanamine, benzoguanamine, cyclohexylguanamine and glycoluril monomers and oligomers of these monomers, which have been substituted on average at two or more positions on the monomer or on each unit of the oligomer with vinyl terminated radicals, the vulcanizable rubber composition being free of resorcinol. 6/1  
B①

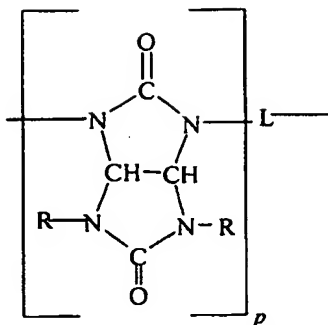
7. The composition of claim 6, wherein at least one of the adhesive resins has been further substituted on average at one or more positions with a radical which comprises carbamoylmethyl or amidomethyl. 7/6

8. A composition of claim 6, wherein the adhesive resin is selected from compounds of the formula: 8/6



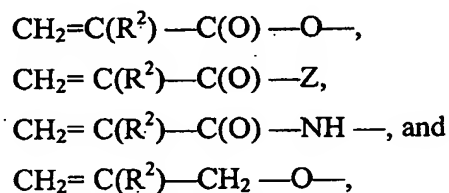


C4N4

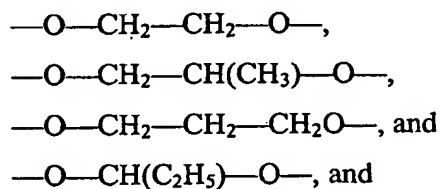


and positional isomers thereof,

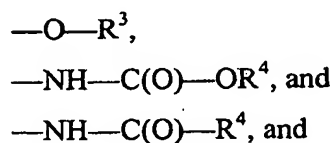
wherein, in each monomer and in each polymerized unit of the oligomers, Y is selected from methyl, phenyl and cyclohexyl, and, on average, at least two R are  $-\text{CH}_2-\text{R}^1$ , and any remaining R are H, and at least 2  $\text{R}^1$  are radicals selected from



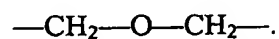
wherein  $\text{R}^2$  is hydrogen or  $\text{C}_1\text{-C}_{18}$  alkyl, and Z is a radical selected from



any remaining  $\text{R}^1$  radicals are selected from

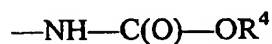


wherein  $\text{R}_3$  is hydrogen or  $\text{R}_4$ , and  $\text{R}_4$  is a  $\text{C}_1\text{-C}_{18}$  alkyl, alicyclic, hydroxyalkyl, alkoxyalkyl or aromatic radical, and in the oligomers, P is 2 to about 10, and L is methylene or the radical



9. The composition of claim 8, wherein on average at least one  $R^1$  in each monomer or in each oligomerized unit of the adhesive resin is:

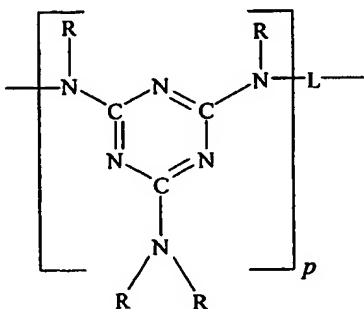
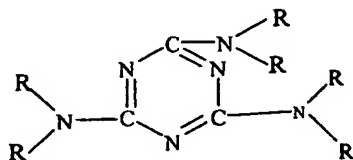
9/8



wherein  $R^4$  is as defined in claim 8.

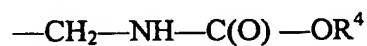
10. The composition of claim 9, wherein the adhesive resin is a compound of the formula

10/9



11. The composition of claim 10, wherein in the adhesive resin formulas, on average at least one R radical in each monomer or in each oligomerized unit is

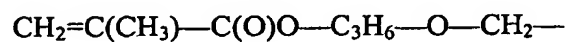
11/10



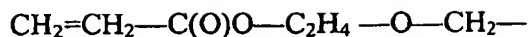
wherein  $R^4$  is a  $\text{C}_1$ - $\text{C}_{18}$  alkyl, alicyclic, hydroxyalkyl, alkoxyalkyl or aromatic radical.

12. The composition of claim 10, wherein on average at least two R radicals are selected from

12/10



and



and at least one R radical is selected from



and



13. The composition of claim 8, further comprising an additional additive selected from hydroxymethylated and alkoxymethylated (alkoxy having 1-5 carbon atoms) derivatives of melamine, acetoguanamine, benzoguanamine, cyclohexylguanamine and glycoluril and their oligomers.

13/8

14. The composition of claim 6, wherein the adhesive resin is a derivative of melamine or an oligomer of melamine.

14/6

15. The composition of claim 6, wherein the adhesive resin is a derivative of acetoguanamine or an oligomer of acetoguanamine.

15/6

16. The composition of claim 6, wherein the adhesive resin is a derivative of benzoguanamine or an oligomer of benzoguanamine.

16/6

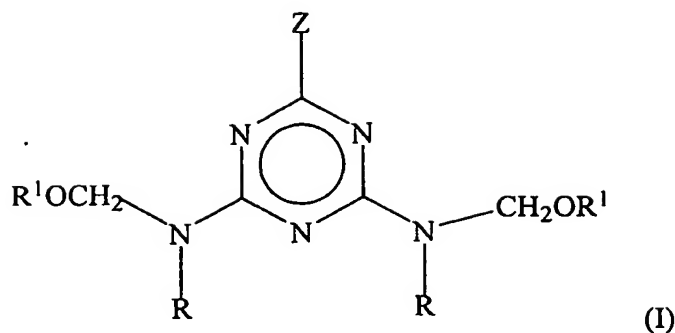
17. The composition of claim 6, wherein the adhesive resin is a derivative of cyclohexylguanamine or an oligomer of cyclohexylguanamine.

17/6

18. The composition of claim 1, wherein the adhesive resin is a self-condensing alkylated triazine resin selected from the group consisting of (i), (ii), and (iii):

18/1

(i) a self-condensing alkylated triazine resin having at least one of imino or methylol functionality and represented by formula (I)



(ii) an oligomer of (i), or

(iii) a mixture of (i) and (ii), wherein

Z is -N(R)(CH<sub>2</sub>OR<sup>1</sup>), aryl having 6 to 10 carbon atoms, alkyl having 1 to 20 carbon atoms or an acetyl group,

each R is independently hydrogen or -CH<sub>2</sub>OR<sup>1</sup>, and

each R<sup>1</sup> is independently hydrogen or an alkyl group having 1 to 12 carbon atoms,

provided that at least one R is hydrogen or -CH<sub>2</sub>OH and at least one R<sup>1</sup> is selected from the alkyl group; and

wherein the vulcanizable rubber composition is substantially free of methylene acceptor coreactants.

19. The composition of claim 18, wherein at least one R group is hydrogen.

19/18

20. The composition of claim 19, wherein at least one R<sup>1</sup> group is a lower alkyl group having 1 to 6 carbon atoms.

20/19

21. The composition of claim 20, wherein the adhesive resin is a derivative of melamine, benzoguanamine, cyclohexylguanamine, or acetoguanamine, or an oligomer thereof.

21/20

22. The composition of claim 20, wherein Z is -N(R)(CH<sub>2</sub>OR<sup>1</sup>).

22/20

23. The composition of claim 4, wherein the phenol-formaldehyde resin is resorcinol-formaldehyde; and the melamine-formaldehyde resin is N-(substituted oxymethyl) melamine-formaldehyde.

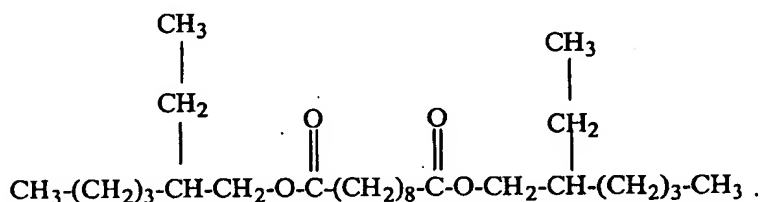
23/4

24. The composition of claim 1, wherein the ester has the formula II and comprises a saturated diester formed by the reaction of sebacic acid and a C<sub>6</sub>-C<sub>24</sub> alcohol, straight chain or branched, saturated or unsaturated containing 1 to 3 carbon-to-carbon double bonds.

24/1

25. The composition of claim 24, wherein the alcohol is 2-ethylhexyl alcohol, and the ester has the following formula:

25/24



26. The composition of claim 1, wherein the ester is an unsaturated diester formed by the reaction of a C<sub>36</sub> dimer acid and a C<sub>3</sub>-C<sub>18</sub> alcohol, straight chain or branched, saturated or unsaturated containing 1 to 3 carbon-to-carbon double bonds.

26/1

27. The composition of claim 26, wherein the alcohol is 2-ethylhexyl alcohol.

27/26

28. The composition of claim 26, wherein the alcohol is tridecyl alcohol.

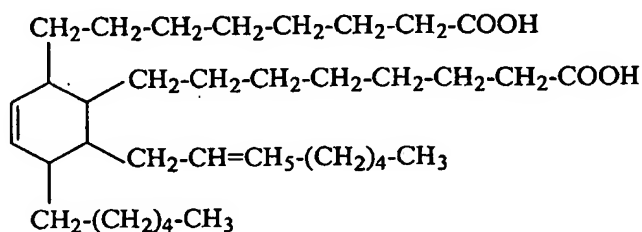
28/26

29. The composition of claim 26, wherein the alcohol is oleyl alcohol.

29/26

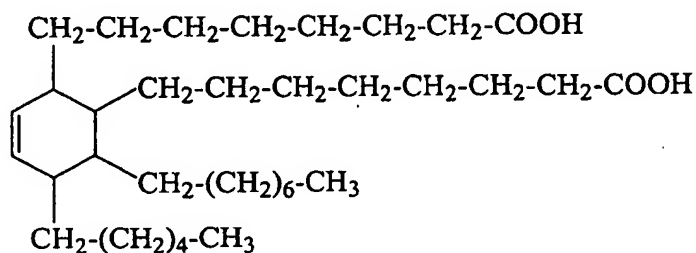
30. The composition of claim 1, wherein the ester comprises the following dimer acid reacted with a C<sub>3</sub>-C<sub>24</sub> alcohol:

30/1



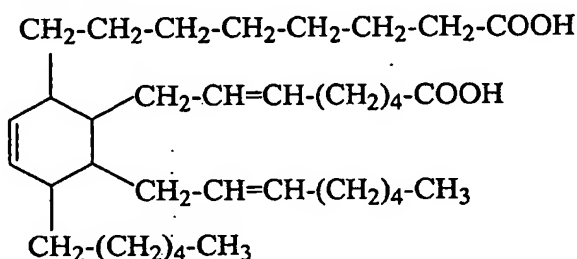
31. The composition of claim 1, wherein the ester comprises the following dimer acid reacted with a C<sub>3</sub>-C<sub>24</sub> alcohol:

32/1



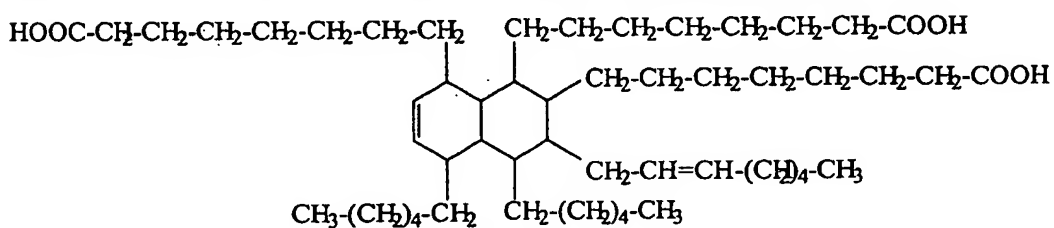
32. The composition of claim 1, wherein the ester comprises the following dimer acid reacted with a C<sub>3</sub>-C<sub>24</sub> alcohol:

32/1



33. The composition of claim 1, wherein the ester is the reaction product of a C<sub>3</sub>-C<sub>24</sub> alcohol with a tricarboxylic acid, having the following formula:

33/1



34. The composition of claim 1, wherein the ester is a combination of compounds of formula I, II, III, and IV.

34/1

35. The composition of claim 34, wherein the ester is a reaction product of a C<sub>3</sub>-C<sub>24</sub> alcohol straight chain or branched, saturated or unsaturated having 1 to 3 carbon-to-carbon double bonds, with a dimer acid having CAS #61788-89-4.

35/34

36. The composition of claim 35, wherein the alcohol is 2-ethylhexyl alcohol. 36/35
37. The composition of claim 35, wherein the alcohol is a tridecyl alcohol. 37/35
38. The composition of claim 35, wherein the alcohol is an oleyl alcohol. 38/35
39. The composition of claim 1, wherein the adhesion promoter is a liquid selected from the group consisting of a solvent solution and a water-based emulsion.
40. The composition of claim 39, wherein the adhesion promoter is a solvent solution comprising 2-ethylhexyl alcohol.
41. The composition of claim 1, wherein the adhesion promoter is mixed with a solid, inert carrier.
42. The composition of claim 41, wherein the solid, inert carrier is calcium silicate.
43. The composition of claim 1, further comprising a reactive diluent in an amount of about 0.5% to about 50% by weight, based on the total weight of the adhesion promoter.
44. The composition of claim 41, wherein the reactive diluent is a monomer selected from the group consisting of (1) a glycidyl ether; (2) a diglycidyl ether; (3) an aliphatic, straight chain epoxide; (4) an epoxidized vegetable oil; (5) a cycloaliphatic epoxy; (6) a glycidyl ester; (7) a diglycidyl ester; and any combination thereof.
45. A cord-reinforced article of manufacture comprising a plurality of cords selected from polymeric cords, metal cords, glass cords, and a combination thereof, adhered to the thermoplastic polymeric material composition of claim 1. 45

Article

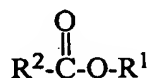
46. The composition of claim 1, wherein the  $R^2$ ,  $R^5$ ,  $R^7$ ,  $R^{12}$ ,  $R^{14}$  are fatty acid residues derived from animal or vegetable fatty acids.

47. The composition of claim 46, wherein the fatty acids are selected from the group consisting of butter; lard; tallow; grease; herring; menhaden; pilchard; sardine; babassu; castor; coconut; corn; cottonseed; jojoba; linseed; oiticia; olive; palm; palm kernel; peanut; rapeseed; safflower; soya; sunflower; tall; tung; and mixtures thereof.

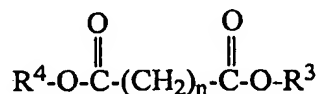
48. The composition of claim 47, wherein the fatty acid residues are selected from the group consisting of hexanoic; octanoic; decanoic; dodecanoic; 9-dodecenoic; tetradecanoic; 9-tetradecenoic; hexadecanoic; 9-hexadecenoic; octadecanoic; 9-octadecenoic; 9-octadecenoic, 12-hydroxy; 9, 12-octadecadienoic; 9, 12, 15-octadecatrienoic; 9, 11, 13-octadecatrienoic; 9, 11, 13-octadecatrienoic, 4-oxo; octadecatetrenoic; eicosanoic; 11-eicosenoic; eicosadienoic; eicosatrienoic; 5, 8, 11, 14-eicosatetraenoic; eicosapentaenoic; docosanoic; 13-docosenoic; docosatetraenoic; 4, 8, 12, 15, 19-docosapentaenoic; docosaheptaenoic; tetracosenoic; and 4, 8, 12, 15, 18, 21-tetracosahexaenoic.

Process

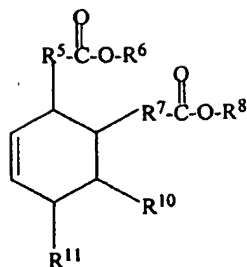
49. A method of increasing the adhesion of a thermoplastic polymeric material composition to a polymer, glass, or metal substrate; said thermoplastic polymeric material composition comprising a thermoplastic polymeric material selected from the group consisting of thermoplastic polymers, thermoplastic polymer alloys, and combinations thereof, and an adhesive resin, comprising adding to said thermoplastic polymeric material composition, in an amount of about 0.1% to 15% by weight, based on the weight of the rubber, an ester having formula I, II, III, IV, or mixtures thereof:



wherein  $\text{R}^1$  is a  $\text{C}_3$ - $\text{C}_{24}$  alkyl radical, straight chain or branched, saturated or unsaturated containing 1 to 3 carbon-to-carbon double bonds;  $\text{R}^2$  is a  $\text{C}_3$ - $\text{C}_{24}$  saturated fatty acid residue, or an unsaturated fatty acid residue having 1 to 6 carbon-to-carbon double bonds;



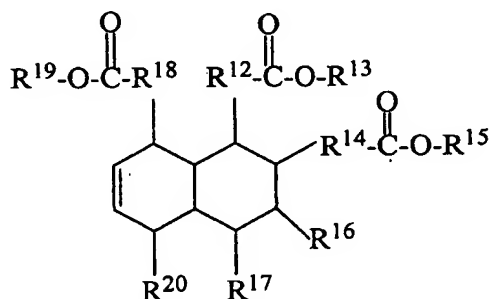
wherein  $n=3$ -24 and  $\text{R}^3$  and  $\text{R}^4$ , same or different, are a  $\text{C}_3$ - $\text{C}_{24}$  alkyl radical, straight chain or branched;



wherein  $R^5$  and  $R^7$ , same or different, are a  $C_3$ - $C_{24}$  hydro carbon chain, straight chain or branched, either saturated or having 1 to 6 carbon-to-carbon double bonds;

$R^6$  and  $R^8$ , same or different, are a  $C_3$ - $C_{24}$  alkyl radical, straight chain or branched; and

$R^{10}$  and  $R^{11}$ , same or different, are a  $C_3$ - $C_{24}$ , saturated hydrocarbon chain, straight chain or branched; or an unsaturated  $C_3$ - $C_{24}$ , hydrocarbon chain, straight chain or branched, having 1 to 6 carbon-to-carbon double bonds;



wherein  $R^{12}$ ,  $R^{14}$  and  $R^{18}$ , same or different, are a  $C_3$ - $C_{24}$  hydrocarbon chain, straight chain or branched, either saturated or having 1 to 6 carbon-to-carbon double bonds;

$R^{13}$ ,  $R^{15}$  and  $R^{19}$ , same or different, are  $C_3$ - $C_{24}$  alkyl radical, straight chain or branched, saturated or unsaturated containing 1 to 3 carbon-to-carbon double bonds; and

$R^{16}$ ,  $R^{17}$  and  $R^{20}$ , same or different, are  $C_3$ - $C_{24}$  saturated hydrocarbon chain, straight chain or branched; or unsaturated  $C_3$ - $C_{24}$  hydrocarbon chain, straight chain or branched, containing 1 to 6 carbon-to-carbon double bonds.

50. The method of claim 49, wherein the substrate is a plurality of cords.

51. The method of claim 49, wherein the substrate is a polymeric sheet or fabric.
52. The method of claim 49, wherein the substrate is metal flat stock material.
53. The method of claim 49, wherein the adding comprises adding a liquid comprising the adhesive resin and the ester having Formula I, II, III, IV, or mixtures thereof, and the liquid is selected from the group consisting of a solvent solution and a water-based emulsion.
54. The method of claim 53, is a solvent solution comprising 2-ethylhexyl alcohol.
55. The method of claim 53, wherein the liquid is a solvent solution further comprising a reactive diluent in an amount of about 0.5% to about 50% by weight, based on the total weight of the adhesive resin and the ester having Formula I, II, III, IV, or mixtures thereof.
56. The method of claim 55, wherein the reactive diluent is a monomer selected from the group consisting of (1) a glycidyl ether; (2) a diglycidyl ether; (3) an aliphatic, straight chain epoxide; (4) an epoxidized vegetable oil; (5) a cycloaliphatic epoxy; (6) a glycidyl ester; (7) a diglycidyl ester; and any combination thereof.
57. The method of claim 49, wherein the adding comprises adding a mixture of the adhesive resin and the ester having Formula I, II, III, IV, or mixtures thereof, and a solid, inert carrier.
58. The method of claim 49, wherein the thermoplastic polymeric material is heated to a temperature sufficient to melt the thermoplastic material.



# STIC Search Results Feedback Form

**EIC17000**

Questions about the scope or the results of the search? Contact *the EIC searcher* or contact:

Kathleen Fuller, EIC 1700 Team Leader  
571/272-2505 REMSEN 4B28

## Voluntary Results Feedback Form

- I am an examiner in Workgroup:  Example: 1713  
➤ Relevant prior art **found**, search results used as follows:

- ☐ 102 rejection
- ☐ 103 rejection
- ☐ Cited as being of interest.
- ☐ Helped examiner better understand the invention.
- ☐ Helped examiner better understand the state of the art in their technology.

Types of relevant prior art found:

- ☐ Foreign Patent(s)
- ☐ Non-Patent Literature  
(journal articles, conference proceedings, new product announcements etc.)

- Relevant prior art **not found**:

- ☐ Results verified the lack of relevant prior art (helped determine patentability).
- ☐ Results were not useful in determining patentability or understanding the invention.

Comments:

=> fil reg

FILE 'REGISTRY' ENTERED AT 16:08:37 ON 29 NOV 2005

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STRUCTURE FILE UPDATES: 28 NOV 2005 HIGHEST RN 868827-82-1

DICTIONARY FILE UPDATES: 28 NOV 2005 HIGHEST RN 868827-82-1

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2005

Please note that search-term pricing does apply when conducting SmartSELECT searches.

\*\*\*\*\*  
\*  
\* The CA roles and document type information have been removed from \*  
\* the IDE default display format and the ED field has been added, \*  
\* effective March 20, 2005. A new display format, IDERL, is now \*  
\* available and contains the CA role and document type information. \*  
\*  
\*\*\*\*\*

Structure search iteration limits have been increased. See HELP SLIMITS for details.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/ONLINE/UG/regprops.html>

=> fil hcap

FILE 'HCAPLUS' ENTERED AT 16:08:40 ON 29 NOV 2005

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FILE COVERS 1907 - 29 Nov 2005 VOL 143 ISS 23

FILE LAST UPDATED: 28 Nov 2005 (20051128/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d his

(FILE 'HOME' ENTERED AT 09:33:15 ON 29 NOV 2005)

FILE 'REGISTRY' ENTERED AT 09:33:56 ON 29 NOV 2005  
ACT POULOS196/A

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L1 STR  
L2 SCR 1992  
L3 SCR 2005  
L4 SCR 1199  
L5 SCR 2016  
L6 SCR 2032  
L7 SCR 1968  
L8 SCR 2026  
L9 32210 SEA FILE=REGISTRY SSS FUL L1 AND L3 AND L4 NOT (L2 OR L5  
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E PHENOL/CN  
E PHENOL-FORMALDEHYDE/CN

FILE 'STNGUIDE' ENTERED AT 09:39:25 ON 29 NOV 2005

FILE 'REGISTRY' ENTERED AT 09:41:10 ON 29 NOV 2005  
E MELAMINE-FORMALDEHYDE/CN  
E PHENOL-FORMALDEHYDE/CN  
L10 7 S E4-12  
E MELAMINE-FORMALDEHYDE/CN  
L11 7 S E4-12  
E NAPHTHOL-FORMALDEHYDE/CN  
L12 1 S E4  
E POLYEPOXIDE/CN  
E TRIALLYL CYANURATE RESORCINOL FORMALDEHYDE/CN  
E P-CHLOROPHENOL RESORCINOL FORMALDEHYDE/CN  
E RESORCINOL-FORMALDEHYDE/CN  
L13 1 S E4-7

FILE 'STNGUIDE' ENTERED AT 10:15:28 ON 29 NOV 2005

FILE 'REGISTRY' ENTERED AT 10:33:33 ON 29 NOV 2005

FILE 'STNGUIDE' ENTERED AT 10:37:00 ON 29 NOV 2005

FILE 'REGISTRY' ENTERED AT 10:40:54 ON 29 NOV 2005  
E STYRENE-BUTADIENE/CN  
L14 2 S E4-6  
E STYRENE-BUTADIENE 2-VINYLPYRIDINE/CN

FILE 'STNGUIDE' ENTERED AT 10:44:23 ON 29 NOV 2005

FILE 'REGISTRY' ENTERED AT 10:51:59 ON 29 NOV 2005

E STYRENE 2-VINYLPYRIDINE/CN  
E MELAMINE/CN

L15 1 S E3  
E ACETOGUANAMINE/CN  
L16 1 S E3  
E BENZOGUANAMINE/CN  
L17 1 S E3  
E CYCLOHEXYLGUANAMINE/CN  
L18 1 S E3  
E GLYCOLURIL/CN  
L19 1 S E3

FILE 'LREGISTRY' ENTERED AT 11:03:27 ON 29 NOV 2005

L20 STR  
L21 0 S L20  
L22 1 S MELAMINE/CN  
L23 571 S 46.492.16/RID

FILE 'REGISTRY' ENTERED AT 11:15:41 ON 29 NOV 2005

L24 STR  
L25 50 S L24  
L26 9089 S C3N2-C3N2/EA  
L27 613 S 180.226.1/RID

FILE 'STNGUIDE' ENTERED AT 11:27:18 ON 29 NOV 2005

FILE 'HCAPLUS' ENTERED AT 11:40:26 ON 29 NOV 2005

FILE 'HCAPLUS' ENTERED AT 12:33:17 ON 29 NOV 2005

L28 61218 S L9  
L29 16882 S L10  
L30 22989 S L29 OR PHENOL(W) FORMALDEHYDE  
L31 19388 S L11 OR MELAMINE(W) FORMALDEHYDE  
L32 109 S L12 OR NAPHTHOL(W) FORMALDEHYDE  
L33 3424 S L13 OR RESORCINOL(W) FORMALDEHYDE

FILE 'STNGUIDE' ENTERED AT 12:52:34 ON 29 NOV 2005

FILE 'HCAPLUS' ENTERED AT 12:58:46 ON 29 NOV 2005

L34 42 S (TRIALLYL(W) CYANURATE (3A) RESORCINOL OR P(W) CHLOROPHENOL  
L35 896 S (POLYMER# OR COPOLYMER#) (2A) STYRENE (3A) BUTADIENE (3A) VIN

FILE 'STNGUIDE' ENTERED AT 13:18:02 ON 29 NOV 2005

FILE 'HCAPLUS' ENTERED AT 13:20:56 ON 29 NOV 2005

L36 288 S (DERIVATIVE# OR OLIGOMER#) (2A) (MELAMINE OR ACETOGUANAMI  
L37 2116 S POLYEPOXIDE  
E US20040127615/PN  
L38 4 S E3

FILE 'STNGUIDE' ENTERED AT 13:29:27 ON 29 NOV 2005

FILE 'STNGUIDE' ENTERED AT 13:36:22 ON 29 NOV 2005

FILE 'HCAPLUS' ENTERED AT 13:42:06 ON 29 NOV 2005

L39 149 S THERMOPLASTIC(A) (POLYMER? OR RESIN#) AND (ADHESI? OR AD  
L40 1 S L38 AND L39  
L41 18 S L39 AND (ADHESI? OR ADHERE?) (A) (RESIN# OR POLYMER#)  
L42 4 S L39 AND (L30 OR L31 OR L32 OR L37 OR L34 OR L35)  
L43 2 S L39 AND L33

FILE 'REGISTRY' ENTERED AT 13:59:00 ON 29 NOV 2005

L44 154205 S L23  
L45 613 S L27

FILE 'HCAPLUS' ENTERED AT 13:59:41 ON 29 NOV 2005

L46 103670 S L44  
L47 1162 S L45

FILE 'STNGUIDE' ENTERED AT 14:05:46 ON 29 NOV 2005

FILE 'HCAPLUS' ENTERED AT 14:06:55 ON 29 NOV 2005

FILE 'STNGUIDE' ENTERED AT 14:15:49 ON 29 NOV 2005

FILE 'REGISTRY' ENTERED AT 14:25:16 ON 29 NOV 2005

L48 1 S 108-78-1/RN  
L49 1 S 542-02-9/RN  
L50 1 S 91-76-9/RN  
L51 1 S 20729-20-8/RN  
L52 1 S 496-46-8/RN

FILE 'HCAPLUS' ENTERED AT 14:34:25 ON 29 NOV 2005

L53 2666 S L48/D  
L54 51 S L49/D  
L55 300 S L50/D  
L56 5 S L51/D  
L57 65 S L52/D  
L58 0 S L39 AND L53  
L59 0 S L39 AND L54  
L60 0 S L39 AND L55  
L61 0 S L39 AND L56  
L62 0 S L39 AND L57  
L63 5 S L39 AND L46

*claim 6*

FILE 'STNGUIDE' ENTERED AT 14:50:58 ON 29 NOV 2005

FILE 'HCAPLUS' ENTERED AT 14:55:08 ON 29 NOV 2005

L64 00S L39 AND L47 → *claim 8, the adhesive resin having compound w/ C6H4 Ring*  
L65 00S L39 AND L36 → *claim 6*

FILE 'STNGUIDE' ENTERED AT 14:59:21 ON 29 NOV 2005

FILE 'HCAPLUS' ENTERED AT 14:59:51 ON 29 NOV 2005

L66 81 S L39 AND (SYNTHETIC+ALL/SC OR PLASTICS+ALL/SC)  
L67 1 S L38 AND L66  
L68 2 S L66 AND SYNTHETIC ELASTOMERS/SC  
L69 0 S L38 AND L68  
L70 29 S L66 AND MOA/RL  
L71 28 S L39 AND (ADHESI? OR ADHERE?) (2W) (RESIN# OR POLYMER# OR  
L72 1 S L38 AND L71

FILE 'STNGUIDE' ENTERED AT 15:22:11 ON 29 NOV 2005

FILE 'HCAPLUS' ENTERED AT 15:44:12 ON 29 NOV 2005

L73 79 S L39 AND (RUBBER? OR PLASTICS)/SC  
L74 29 S L73 AND MOA/RL

FILE 'STNGUIDE' ENTERED AT 15:45:18 ON 29 NOV 2005

FILE 'REGISTRY' ENTERED AT 15:59:29 ON 29 NOV 2005

L75 8378 S 108-78-1/CRN  
L76 125 S 542-02-9/CRN  
L77 626 S 91-76-9/CRN  
L78 23 S 20729-20-8/CRN  
L79 30 S 496-46-8/CRN  
L80 8378 S L75  
L81 125 S L76  
L82 626 S L77  
L83 23 S L78  
L84 30 S L79  
L85 0 S L39 AND L80  
L86 0 S L39 AND L81  
L87 0 S L39 AND L82  
L88 0 S L39 AND L83  
L89 0 S L39 AND L84  
SET COST OFF

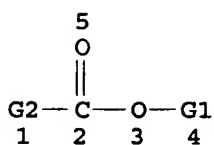
*claim 6*

FILE 'REGISTRY' ENTERED AT 16:08:37 ON 29 NOV 2005

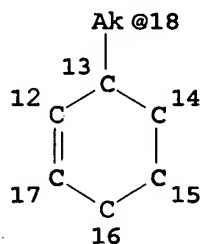
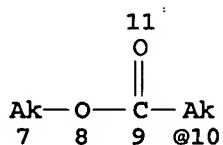
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=> d 171 que stat

L1 STR



Ak @6



Ak @26

VAR G1=H/26

VAR G2=6/10/18

NODE ATTRIBUTES:

CONNECT IS E1 RC AT 6

CONNECT IS E1 RC AT 7  
CONNECT IS E1 RC AT 26  
DEFAULT MLEVEL IS ATOM  
DEFAULT ECLEVEL IS LIMITED  
ECOUNT IS M3-X24 C AT 6  
ECOUNT IS M3-X24 C AT 7  
ECOUNT IS M3-X24 C AT 10  
ECOUNT IS M3-X24 C AT 18  
ECOUNT IS M3-X24 C AT 26

GRAPH ATTRIBUTES:  
RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 19

STEREO ATTRIBUTES: NONE

L2 SCR 1992  
L3 SCR 2005  
L4 SCR 1199  
L5 SCR 2016  
L6 SCR 2032  
L7 SCR 1968  
L8 SCR 2026  
L9 32210 SEA FILE=REGISTRY SSS FUL L1 AND L3 AND L4 NOT (L2 OR L5  
OR L6 OR L7 OR L8)  
L28 61218 SEA FILE=HCAPLUS L9  
L39 149 SEA FILE=HCAPLUS THERMOPLASTIC(A) (POLYMER? OR RESIN#)  
AND (ADHESI? OR ADHERE?) AND L28  
L71 28 SEA FILE=HCAPLUS L39 AND (ADHESI? OR ADHERE?) (2W) (RESIN#  
OR POLYMER# OR COPOLYMER#)

=> d l71 i5ib abs hitstr ind 1-28

L71 ANSWER 1 OF 28 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 2005:1175041 HCAPLUS  
DOCUMENT NUMBER: 143:406631  
TITLE: Biodegradable thermoplastic  
resin compositions with good workability  
and surface appearance  
INVENTOR(S): Shishido, Koichi; Aoki, Hideo; Ito, Koichi  
PATENT ASSIGNEE(S): Mitsubishi Rayon Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005306984	A2	20051104	JP 2004-125157	20040421
PRIORITY APPLN. INFO.:			JP 2004-125157	200404

21

AB The compns. contain (A) 91-99.99% biodegradable polymers and (B) 0.01-9% (based on A + B = 100%) acrylic polymers with reduced viscosity at 25° ( $\eta_{sp}/C$ ) <2. Thus, 99.9% lactic acid polymer (Lacea H 100) and 0.1% Bu acrylate-Bu methacrylate-Me methacrylate copolymer with reduced viscosity at 25° ( $\eta_{sp}/C$ ) 1.0 were kneaded in an extruder to show no adhesion of polymers on dies. Pellets prepd. by kneading the above components were injection-molded to show good gloss and smooth surfaces.

IT 121092-91-9P, Butyl acrylate-butyl methacrylate-methyl methacrylate graft copolymer  
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)  
 (biodegradable thermoplastic resin compns. with good workability and surface appearance)

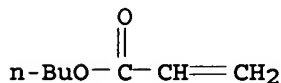
RN 121092-91-9 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, butyl ester, polymer with butyl 2-propenoate and methyl 2-methyl-2-propenoate, graft (9CI) (CA INDEX NAME)

CM 1

CRN 141-32-2

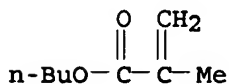
CMF C7 H12 O2



CM 2

CRN 97-88-1

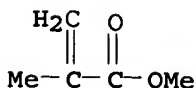
CMF C8 H14 O2



CM 3

CRN 80-62-6

CMF C5 H8 O2



IC ICM C08L101-00  
ICS C08L101-16; C08L033-00  
CC 37-6 (Plastics Manufacture and Processing)  
ST biodegradability polymer acrylic thermoplastic compn workability;  
polylactic acid acrylate polymer smooth surface  
IT Biodegradable materials  
(biodegradable **thermoplastic resin** compns.  
with good workability and surface appearance)  
IT Polyesters, uses  
RL: POF (Polymer in formulation); USES (Uses)  
(biodegradable **thermoplastic resin** compns.  
with good workability and surface appearance)  
IT Plastics, uses  
RL: POF (Polymer in formulation); USES (Uses)  
(thermoplastics; biodegradable **thermoplastic resin** compns. with good workability and surface appearance)  
IT 26100-51-6  
RL: POF (Polymer in formulation); USES (Uses)  
(assumed monomers; biodegradable **thermoplastic resin** compns. with good workability and surface appearance)  
IT 121092-91-9P, Butyl acrylate-butyl methacrylate-methyl methacrylate graft copolymer  
RL: IMF (Industrial manufacture); MOA (Modifier or additive use);  
PREP (Preparation); USES (Uses)  
(biodegradable **thermoplastic resin** compns. with good workability and surface appearance)  
IT 26023-30-3, Lacea H 100  
RL: POF (Polymer in formulation); USES (Uses)  
(biodegradable **thermoplastic resin** compns. with good workability and surface appearance)

L71 ANSWER 2 OF 28 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:1014011 HCAPLUS

DOCUMENT NUMBER: 141:425113

TITLE: Laminate composed of polymer particles layer, adhesive layer, and thermoplastic polymer layer and its manufacture by thermal fusion

INVENTOR(S): Ozawa, Hiroshi; Kato, Yuichi; Fukuda, Motohiro

PATENT ASSIGNEE(S): Kuraray Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 32 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004330422	A2	20041125	JP 2003-124970	20030430

PRIORITY APPLN. INFO.:

JP 2003-124970

200304  
30

AB The laminate is composed of a layer of polymer particles (A) prepd. by multi-step polymn., an adhesive layer contg. at least modified polymers (B), and a layer of other thermoplastic polymers (C), wherein A have av. particle diam.  $\leq 150$  nm and comprise  $\geq 2$  layers involving  $\geq 1$  rubber component layers (I) in the inside, prepd. by copolymn. of acrylic acid esters 50-99.99, other monofunctional monomers 49.99-0, and multifunctional monomers 0.01-10%, and  $\geq 1$  thermoplastic resin component layers (II) at least as the outermost layer, prepd. by polymn. of 40-100% methacrylic acid esters and 60-0% other monomers, Mn (by GPC) of the polymers at least constituting the outermost layer of II being  $\leq 30,000$ , wt. ratio I/II = 30/70-90/10. Thus, multistep emulsion-polymn. of Bu acrylate 30, Me methacrylate 13.5, styrene 6.5, and allyl methacrylate 0.2 part (1st step), Bu acrylate 20, Me methacrylate 0.5, styrene 4.5, and allyl methacrylate 0.1 part (2nd step), and 23.75 parts Me methacrylate and 1.25 parts Me acrylate (3rd step) and subsequent coagulation, washing, and drying gave polymer particles with av. particle diam. 104 nm and Mn 18,000. An adhesive compn. comprised 100 parts TS-U (polyurethane-based block copolymer composed of arom. vinyl compd. polymer blocks, hydrogenated conjugated diene polymers, and thermoplastic polyurethane elastomer blocks) and 100 parts Kuramiron U (polytetramethylene glycol-contg. polyester-polyurethane elastomer). The polymer particles were coextrusion-laminated with the adhesive compn. and Ultrathene 635 (ethylene-vinyl acetate copolymer) to give a 100- $\mu$ m thick film with excellent weather resistance. A 1-mm thick hot-pressed laminate sheet comprising these components had high peeling strength.

IT 110254-00-7P, Allyl methacrylate-butyl acrylate-methyl acrylate-methyl methacrylate-styrene graft copolymer  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(manuf. of multilayer acrylic polymer particle/adhesive /thermoplastic polymer laminate with high layer adhesion)

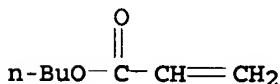
RN 110254-00-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate, ethenylbenzene, methyl 2-propenoate and 2-propenyl 2-methyl-2-propenoate, graft (9CI) (CA INDEX NAME)

CM 1

CRN 141-32-2

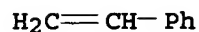
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CM 2

CRN 100-42-5

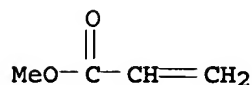
CMF C8 H8



CM 3

CRN 96-33-3

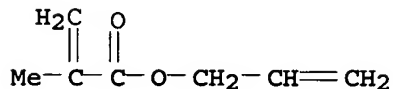
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CM 4

CRN 96-05-9

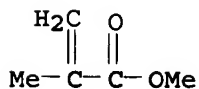
CMF C7 H10 O2



CM 5

CRN 80-62-6

CMF C5 H8 O2



IC ICM B32B025-08

ICS B32B027-08

CC 38-3 (Plastics Fabrication and Uses)

ST acrylic polymer multilayer particle polyolefin laminate;  
polyurethane block adhesive acrylic polymer  
particle laminate; polyolefin adhesive acrylic  
polymer particle laminate

IT Polyurethanes, uses

RL: TEM (Technical or engineered material use); USES (Uses)  
(block, adhesive component; manuf. of multilayer

- acrylic polymer particle/adhesive/thermoplastic polymer laminate with high layer adhesion)
- IT Styrene-butadiene rubber, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(hydrogenated, block, triblock, maleated, Tuftec M 1962, adhesive component; manuf. of multilayer acrylic polymer particle/adhesive/thermoplastic polymer laminate with high layer adhesion)
- IT Laminated plastic films  
(manuf. of multilayer acrylic polymer particle/adhesive/thermoplastic polymer laminate with high layer adhesion)
- IT Laminated plastics, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(manuf. of multilayer acrylic polymer particle/adhesive/thermoplastic polymer laminate with high layer adhesion)
- IT Polyolefins  
RL: TEM (Technical or engineered material use); USES (Uses)  
(modified, adhesive layer; manuf. of multilayer acrylic polymer particle/adhesive/thermoplastic polymer laminate with high layer adhesion)
- IT Urethane rubber, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(polyester-polyoxyalkylene-, block, polytetramethylene glycol-contg., Kuramiron U-G 775, adhesive component; manuf. of multilayer acrylic polymer particle/adhesive/thermoplastic polymer laminate with high layer adhesion)
- IT Thermoplastic rubber  
RL: TEM (Technical or engineered material use); USES (Uses)  
(polyurethanes, adhesive component; manuf. of multilayer acrylic polymer particle/adhesive/thermoplastic polymer laminate with high layer adhesion)
- IT 9011-87-4P, Methyl acrylate-methyl methacrylate copolymer  
731842-58-3P, Methyl methacrylate-propylene diblock copolymer  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(adhesive component; manuf. of multilayer acrylic polymer particle/adhesive/thermoplastic polymer laminate with high layer adhesion)
- IT 108-31-6D, Maleic anhydride, reaction products with polypropylene  
9003-07-0D, Polypropylene, maleated 25101-13-7, Ethylene-methyl methacrylate copolymer 110941-68-9, Admer QF 551 793733-97-8, TU-S  
RL: TEM (Technical or engineered material use); USES (Uses)  
(adhesive component; manuf. of multilayer acrylic polymer particle/adhesive/thermoplastic polymer laminate with high layer adhesion)
- IT 110254-00-7P, Allyl methacrylate-butyl acrylate-methyl acrylate-methyl methacrylate-styrene graft copolymer  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(manuf. of multilayer acrylic polymer particle/adhesive/thermoplastic polymer laminate with high

layer adhesion)  
IT 24937-78-8, Ultrathene 635  
RL: TEM (Technical or engineered material use); USES (Uses)  
(manuf. of multilayer acrylic polymer particle/adhesive  
/thermoplastic polymer laminate with high  
layer adhesion)  
IT 694491-73-1D, Butadiene-styrene triblock copolymer, hydrogenated,  
maleated  
RL: TEM (Technical or engineered material use); USES (Uses)  
(rubber, adhesive component; manuf. of multilayer  
acrylic polymer particle/adhesive/thermoplastic  
polymer laminate with high layer adhesion)

L71 ANSWER 3 OF 28 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:823310 HCAPLUS

DOCUMENT NUMBER: 141:315516

TITLE: Photocurable polymer compositions and their  
sheets with good abrasion and weather resistance  
for manufacture of moldings

INVENTOR(S): Suemura, Kenji; Okazaki, Shogo; Fujii, Hideyuki

PATENT ASSIGNEE(S): Mitsubishi Rayon Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 33 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004277725	A2	20041007	JP 2004-49864	20040225
				20030228

PRIORITY APPLN. INFO.: JP 2003-53413 A

AB The compns. comprise thermoplastic polymers  
having radically polymerizable unsatd. groups in side chains,  
photopolymn. catalysts, and UV absorbers and/or hindered amine-light  
stabilizers. Thus, a compn. contg. glycidyl methacrylate-Me  
methacrylate copolymer acrylate 100, Irgacure 184 (photopolymn.  
catalyst) 3, and Tinuvin P [2-(2'-hydroxy-5'-  
methylphenyl)benzotriazole] 2 parts was applied on an acrylic  
polymer substrate sheet, dried, placed in a mold, vacuum-formed,  
molded with a polycarbonate, and irradiated with UV to give a  
molding with pencil hardness 3H, improved adhesion, and  
good scratch resistance.

IT 83874-34-4P 245681-39-4P, Allyl methacrylate-butyl  
acrylate-1,3-butylene glycol dimethacrylate-styrene copolymer  
RL: IMF (Industrial manufacture); TEM (Technical or engineered  
material use); PREP (Preparation); USES (Uses)  
(rubber, crosslinked, substrate sheet component; photocurable  
polymer compns. and their sheets with good abrasion and weather  
resistance for manuf. of moldings)

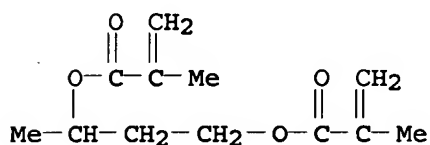
RN 83874-34-4 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl  
2-propenoate, ethenylbenzene, 1-methyl-1,3-propanediyl  
bis(2-methyl-2-propenoate) and 2-propenyl 2-methyl-2-propenoate  
(9CI) (CA INDEX NAME)

CM 1

CRN 1189-08-8

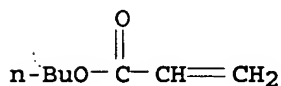
CMF C12 H18 O4



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CRN 141-32-2

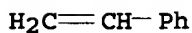
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CM 3

CRN 100-42-5

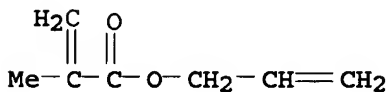
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CM 4

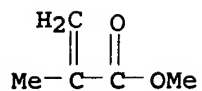
CRN 96-05-9

CMF C7 H10 O2



CM 5

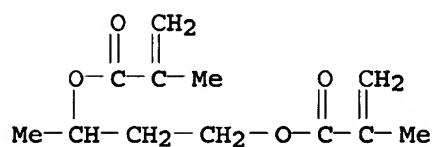
CRN 80-62-6  
CMF C5 H8 O2



RN 245681-39-4 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, 1-methyl-1,3-propanediyl ester, polymer  
with butyl 2-propenoate, ethenylbenzene and 2-propenyl  
2-methyl-2-propenoate (9CI) (CA INDEX NAME)

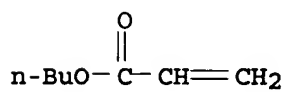
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CRN 1189-08-8  
CMF C12 H18 O4



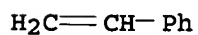
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CRN 141-32-2  
CMF C7 H12 O2



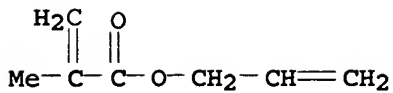
CM 3

CRN 100-42-5  
CMF C8 H8



CM 4

CRN 96-05-9  
CMF C7 H10 O2



- IC ICM C08F299-00  
ICS B29C045-14; B32B027-30; B29K101-10; B29L009-00
- CC 38-3 (Plastics Fabrication and Uses)
- ST photocurable compn abrasion weather resistance molding;  
thermoplastic glycidyl methacrylate methyl polymer molding;  
hydroxymethylphenyl benzotriazole UV absorber acrylic polymer  
molding; light stabilizer hindered amine molding sheet
- IT Synthetic rubber, uses  
RL: IMF (Industrial manufacture); TEM (Technical or engineered  
material use); PREP (Preparation); USES (Uses)  
(Allyl methacrylate-Bu acrylate-butylene glycol  
dimethacrylate-styrene, crosslinked, substrate sheet component;  
photocurable polymer compns. and their sheets with good abrasion  
and weather resistance for manuf. of moldings)
- IT Synthetic rubber, uses  
RL: IMF (Industrial manufacture); TEM (Technical or engineered  
material use); PREP (Preparation); USES (Uses)  
(allyl methacrylate-Bu acrylate-butylene glycol dimethacrylate-Me  
methacrylate-styrene, crosslinked, substrate sheet component;  
photocurable polymer compns. and their sheets with good abrasion  
and weather resistance for manuf. of moldings)
- IT Construction materials  
(decorative sheets; photocurable polymer compns. and their sheets  
with good abrasion and weather resistance for manuf. of moldings)
- IT Light stabilizers  
(hindered amines; photocurable polymer compns. and their sheets  
with good abrasion and weather resistance for manuf. of moldings)
- IT Amines, uses  
RL: MOA (Modifier or additive use); TEM (Technical or engineered  
material use); USES (Uses)  
(hindered, light stabilizers; photocurable polymer compns. and  
their sheets with good abrasion and weather resistance for manuf.  
of moldings)
- IT Abrasion-resistant materials  
Molding of plastics and rubbers  
UV stabilizers  
(photocurable polymer compns. and their sheets with good abrasion  
and weather resistance for manuf. of moldings)
- IT Ethylene-propylene rubber  
Laminated plastics, uses  
Polycarbonates, uses  
RL: PEP (Physical, engineering or chemical process); PYP (Physical  
process); TEM (Technical or engineered material use); PROC  
(Process); USES (Uses)  
(photocurable polymer compns. and their sheets with good abrasion  
and weather resistance for manuf. of moldings)
- IT Molded plastics, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(photocurable polymer compns. and their sheets with good abrasion  
and weather resistance for manuf. of moldings)
- IT Plastics, uses

- RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PYP (Physical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)  
(thermoplastics; photocurable polymer compns. and their sheets with good abrasion and weather resistance for manuf. of moldings)
- IT 2440-22-4, Tinuvin P  
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
(UV absorber; photocurable polymer compns. and their sheets with good abrasion and weather resistance for manuf. of moldings)
- IT 9003-07-0D, Polypropylene, chlorinated  
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(adhesive layer; photocurable polymer compns. and their sheets with good abrasion and weather resistance for manuf. of moldings)
- IT 9010-79-1  
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(ethylene-propylene rubber; photocurable polymer compns. and their sheets with good abrasion and weather resistance for manuf. of moldings)
- IT 41556-26-7, Tinuvin 765 122586-52-1, Tinuvin 123  
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
(light stabilizer; photocurable polymer compns. and their sheets with good abrasion and weather resistance for manuf. of moldings)
- IT 99638-49-0P, Glycidyl methacrylate-methyl methacrylate copolymer acrylate  
RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PYP (Physical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)  
(photocurable polymer compns. and their sheets with good abrasion and weather resistance for manuf. of moldings)
- IT 115-07-1D, Propylene, polymers 9003-56-9, ABS resin  
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(photocurable polymer compns. and their sheets with good abrasion and weather resistance for manuf. of moldings)
- IT 83874-34-4P 245681-39-4P, Allyl methacrylate-butyl acrylate-1,3-butylene glycol dimethacrylate-styrene copolymer  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(rubber, crosslinked, substrate sheet component; photocurable polymer compns. and their sheets with good abrasion and weather resistance for manuf. of moldings)
- IT 9011-87-4P, Methyl acrylate-methyl methacrylate copolymer 25852-37-3P, Butyl acrylate-methyl methacrylate copolymer  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(substrate sheet component; photocurable polymer compns. and

their sheets with good abrasion and weather resistance for manuf. of moldings)

IT 2530-83-8, KBM 403

RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)

(surface treating agent for silica; photocurable polymer compns. and their sheets with good abrasion and weather resistance for manuf. of moldings)

IT 7631-86-9, IPA ST, uses

RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)

(surface-treated; photocurable polymer compns. and their sheets with good abrasion and weather resistance for manuf. of moldings)

L71 ANSWER 4 OF 28 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:650007 HCAPLUS

DOCUMENT NUMBER: 141:191427

TITLE: Polymerizable composition, thermoplastic resin composition, crosslinked resin, and crosslinked resin composite materials

INVENTOR(S): Sugawara, Tomoo

PATENT ASSIGNEE(S): Zeon Corporation, Japan

SOURCE: PCT Int. Appl., 39 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004067601	A1	20040812	WO 2004-JP902	20040130
W: AE, AE, AG, AL, AL, AM, AM, AM, AT, AT, AU, AZ, AZ, BA, BB, BG, BG, BR, BR, BW, BY, BY, BZ, BZ, CA, CH, CN, CN, CO, CO, CR, CR, CU, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EC, EE, EE, EG, ES, ES, FI, FI, GB, GD, GE, GE, GH, GM, HR, HR, HU, HU, ID, IL, IN, IS, JP, JP, KE, KE, KG, KG, KP, KP, KP, KR, KR, KZ, KZ, KZ, LC, LK, LR, LS, LS, LT, LU, LV, MA, MD, MD, MG, MK, MN, MW, MX, MX, MZ, NA, NI				
EP 1589054	A1	20051026	EP 2004-706864	20040130
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
PRIORITY APPLN. INFO.:			JP 2003-23566	A 20030131
			WO 2004-JP902	W 20040130

AB The polymerizable compn. comprises (i) a cycloolefin monomer (e.g., norbornene, dicyclopentadiene), (ii) a metathesis polymn. catalyst, (iii) a chain transfer agent, (iv) a radical crosslinking agent, and (v) a radical crosslinking retarder selected among alkoxyphenols having  $\geq 1$  substituents on arom. rings, aryloxyphenols, and catechols having  $\geq 2$  substituents on arom. rings. The polymerizable compn. is used as raw material in the prodn. of a curable thermoplastic resin compn. excellent in storage stability and fluidity in heat lamination. A crosslinked resin obtained by crosslinking the thermoplastic resin compn. was used to manuf. composite materials (e.g., copper-clad laminate) with excellent interlaminar adhesion

IT 641991-11-9P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(curable thermoplastic cycloolefin resin compns. with good storage stability and fluidity in heat lamination)

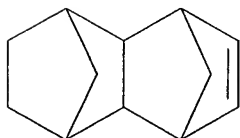
RN 641991-11-9 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-propenyl ester, polymer with bicyclo[2.2.1]hept-2-ene and 1,2,3,4,4a,5,8,8a-octahydro-1,4:5,8-dimethanonaphthalene (9CI) (CA INDEX NAME)

CM 1

CRN 21635-90-5

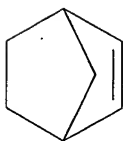
CMF C12 H16



CM 2

CRN 498-66-8

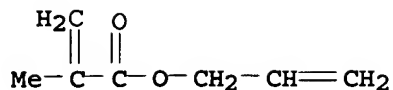
CMF C7 H10



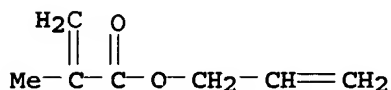
CM 3

CRN 96-05-9

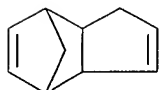
CMF C7 H10 O2



IT 735796-79-9, Allyl methacrylate-dicyclopentadiene polymer  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (curable thermoplastic cycloolefin resin compns. with good  
 storage stability and fluidity in heat lamination)  
 RN 735796-79-9 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, 2-propenyl ester, polymer with  
 3a,4,7,7a-tetrahydro-4,7-methano-1H-indene (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 96-05-9  
 CMF C7 H10 O2



CM 2  
 CRN 77-73-6  
 CMF C10 H12



IC ICM C08G061-00  
 ICS C08L065-00  
 CC 37-6 (Plastics Manufacture and Processing)  
 Section cross-reference(s): 38, 76  
 ST radical crosslinking retarder alkoxyphenol cycloolefin polymer;  
 metathesis norbornene polymer crosslinking retarder catechol; copper  
 clad laminate interlaminar **adhesion** cycloolefin  
**resin**  
 IT Glass fiber fabrics  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (2116AS891AW; curable thermoplastic cycloolefin resin compns.  
 with good storage stability and fluidity in heat lamination)  
 IT Laminated plastics, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (copper-clad; curable thermoplastic cycloolefin resin compns.  
 with good storage stability and fluidity in heat lamination)  
 IT Phenols, uses  
 RL: CAT (Catalyst use); USES (Uses)

- (crosslinking retarder; curable thermoplastic cycloolefin resin compns. with good storage stability and fluidity in heat lamination)
- IT Printed circuit boards  
(curable thermoplastic cycloolefin resin compns. with good storage stability and fluidity in heat lamination)
- IT Crosslinking catalysts  
(neg.; curable thermoplastic cycloolefin resin compns. with good storage stability and fluidity in heat lamination)
- IT Cycloalkenes  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polymers; curable thermoplastic cycloolefin resin compns. with good storage stability and fluidity in heat lamination)
- IT Reinforced plastics  
RL: TEM (Technical or engineered material use); USES (Uses)  
(prepregs; curable thermoplastic cycloolefin resin compns. with good storage stability and fluidity in heat lamination)
- IT 7440-50-8, Copper, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(copper-clad laminates; curable thermoplastic cycloolefin resin compns. with good storage stability and fluidity in heat lamination)
- IT 121-00-6, 2-tert-Butyl-4-methoxyphenol 489-01-0,  
2,6-Di-tert-butyl-4-methoxyphenol 1020-31-1, 3,5-Di-tert-butylcatechol  
RL: CAT (Catalyst use); USES (Uses)  
(crosslinking retarder; curable thermoplastic cycloolefin resin compns. with good storage stability and fluidity in heat lamination)
- IT 641991-11-9P  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(curable thermoplastic cycloolefin resin compns. with good storage stability and fluidity in heat lamination)
- IT 735796-79-9, Allyl methacrylate-dicyclopentadiene polymer  
RL: TEM (Technical or engineered material use); USES (Uses)  
(curable thermoplastic cycloolefin resin compns. with good storage stability and fluidity in heat lamination)

L71 ANSWER 5 OF 28 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:534005 HCAPLUS

DOCUMENT NUMBER: 141:89930

TITLE: Adhesion promoters for cord-reinforced thermoplastics and substrate/thermoplastic composites

INVENTOR(S): Wentworth, Gary; Chen, Zhi; Semlow, Stephen; O'Rourke, Stephen; Stefanisin, Kimberly L.; English, John

PATENT ASSIGNEE(S): The C.P. Hall Company, USA

SOURCE: U.S. Pat. Appl. Publ., 22 pp., Cont.-in-part of U.S. Ser. No. 434,616.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

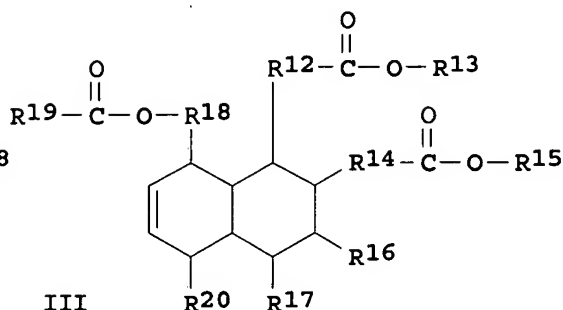
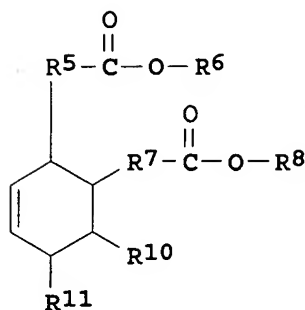
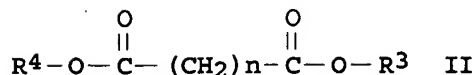
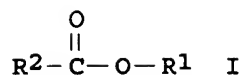
FAMILY ACC. NUM. COUNT: 8

## PATENT INFORMATION:

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US 2004127615	A1	20040701	US 2003-706196	200311 12
US 2003220426	A1	20031127	US 2002-144229	200205 10
US 6884832	B2	20050426		
US 2003220427	A1	20031127	US 2002-301770	200211 21
US 2004002563	A1	20040101	US 2003-434616	200305 09
US 6858664	B2	20050222		
US 2004002564	A1	20040101	US 2003-435212	200305 09
			US 2002-144229	A2 200205 10
			US 2002-301770	A2 200211 21
			US 2003-434616	A2 200305 09
			US 2003-435212	A2 200305 09

## PRIORITY APPLN. INFO.:

GI



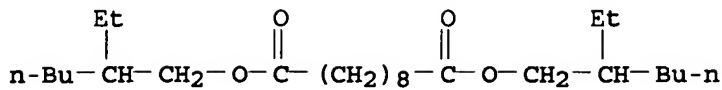
AB A thermoplastic polymeric material compn. comprising a thermoplastic polymeric material selected from the group consisting of thermoplastic polymers, thermoplastic polymer alloys, and combinations thereof, and an adhesion promoter contg. (1) an adhesive resin in an amt. of about 0.1% to about 15% by wt., based on the wt. of the thermoplastic polymeric material in the compn.; and (2) a long chain ester, particularly dimerate and trimerate esters, in an amt. of about 0.1% to about 15% by wt., based on the wt. of the thermoplastic polymeric material in the compn., is capable of unexpected adhesion to substrates such as natural fabric substrates, synthetic polymeric fabric substrates, metal substrates, and thermoplastic polymeric material substrates, particularly natural cords, synthetic polymeric cords, metal cords, and glass cords for use in cord-reinforced articles such as hoses, conveyor belts, transmission belts, and the like. The esters used in the adhesion promoter have formula I, II, III, IV or a combination of any two or more of said esters, wherein R<sup>1</sup>, R<sup>3</sup>, R<sup>4</sup>, R<sup>6</sup>, R<sup>8</sup>, R<sup>13</sup>, R<sup>15</sup> and R<sup>19</sup>, same or different, are a C<sup>3</sup>-C<sup>24</sup> alkyl radical, straight chain or branched, satd. or unsatd. contg. 1 to 3 carbon-to-carbon double bonds; R<sup>2</sup> is a C<sup>3</sup>-C<sup>24</sup> satd. fatty acid residue, or an unsatd. fatty acid residue having 1 to 6 carbon-to-carbon double bonds; n=3-24; R<sup>5</sup>, R<sup>7</sup>, R<sup>12</sup>, R<sup>14</sup>, R<sup>18</sup>, same or different, are a C<sup>3</sup>-C<sup>24</sup> hydrocarbon chain, straight chain or branched, either satd. or having 1 to 6 carbon-to-carbon double bonds; R<sup>10</sup>, R<sup>11</sup>, R<sup>16</sup>, R<sup>17</sup> and R<sup>20</sup>, same or different, are a C<sup>3</sup>-C<sup>24</sup>, satd. hydrocarbon chain, straight chain or branched; or an unsatd. C<sup>3</sup>-C<sup>24</sup>, hydrocarbon chain, straight chain or branched, having 1 to 6, carbon-to-carbon double bonds.

IT 122-62-3

RL: MOA (Modifier or additive use); USES (Uses)  
(adhesion promoter; adhesion promoters for  
cord-reinforced thermoplastics and substrate/thermoplastic  
composites)

RN 122-62-3 HCAPLUS

CN Decanedioic acid, bis(2-ethylhexyl) ester (9CI) (CA INDEX NAME)



IC ICM C08K005-09  
 INCL 524284000  
 CC 37-6 (Plastics Manufacture and Processing)  
 ST **adhesion** promoter cord reinforced thermoplastic; dimerate ester long chain **adhesion** promoter; trimerate ester long chain **adhesion** promoter  
 IT Fatty acids, uses  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (C18-unsatd., dimers and trimers, 2-ethylhexyl esters, **adhesion** promoter; **adhesion** promoters for cord-reinforced thermoplastics and substrate/thermoplastic composites)  
 IT Aminoplasts  
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
 (N-oxymethyl deriv.; **adhesion** promoters for cord-reinforced thermoplastics and substrate/thermoplastic composites)  
 IT Urethane rubber, uses  
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
 (TDI-based; **adhesion** promoters for cord-reinforced thermoplastics and substrate/thermoplastic composites)  
 IT Fatty acids, uses  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (**adhesion** promoter; **adhesion** promoters for cord-reinforced thermoplastics and substrate/thermoplastic composites)  
 IT **Adhesion** promoters  
 Composites  
 Conveyor belts  
 Hoses  
 (**adhesion** promoters for cord-reinforced thermoplastics and substrate/thermoplastic composites)  
 IT Epoxy resins, uses  
 Phenolic resins, uses  
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
 (**adhesion** promoters for cord-reinforced thermoplastics and substrate/thermoplastic composites)  
 IT Glass, uses  
 Metals, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (cord; **adhesion** promoters for cord-reinforced thermoplastics and substrate/thermoplastic composites)  
 IT Fatty acids, uses  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (dimer acids, C18, reaction products with a C3-C24 alc., **adhesion** promoter; **adhesion** promoters for

- cord-reinforced thermoplastics and substrate/thermoplastic composites)
- IT Polyurethanes, uses  
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
(polyester-; **adhesion** promoters for cord-reinforced thermoplastics and substrate/thermoplastic composites)
- IT Reinforced plastics  
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
(thermoplastics, cord-reinforced; **adhesion** promoters for cord-reinforced thermoplastics and substrate/thermoplastic composites)
- IT Belts  
(transmission; **adhesion** promoters for cord-reinforced thermoplastics and substrate/thermoplastic composites)
- IT 9002-86-2, Geon 121  
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
(OxyVinyls 240F; **adhesion** promoters for cord-reinforced thermoplastics and substrate/thermoplastic composites)
- IT 111-20-6D, Sebacic acid, reaction products with a C6-C24 alc.  
122-62-3 67290-26-0D, reaction products with a C3-C24 alc.  
639479-06-4D, reaction products with a C3-C24 alc. 639479-07-5D, reaction products with a C3-C24 alc. 639479-08-6D, reaction products with a C3-C24 alc. 640724-45-4, RX-13845 640725-01-5, RX-13928 713516-57-5, RX 13946 713516-96-2, RX 13939 713516-98-4, RX 13943 713517-22-7, RX 13977 713517-75-0, RX 13978  
RL: MOA (Modifier or additive use); USES (Uses)  
(**adhesion** promoter; **adhesion** promoters for cord-reinforced thermoplastics and substrate/thermoplastic composites)
- IT 104-76-7, 2-Ethylhexyl alcohol  
RL: NUU (Other use, unclassified); USES (Uses)  
(**adhesion** promoters for cord-reinforced thermoplastics and substrate/thermoplastic composites)
- IT 9003-08-1D, Melamine formaldehyde copolymer, N-oxyethyl deriv.  
9003-35-4, Phenol-formaldehyde copolymer 24969-11-7, Resorcinol formaldehyde copolymer 25053-48-9, Styrene, butadiene, 2-vinylpyridine copolymer 28410-58-4, Formaldehyde-resorcinol-triallyl cyanurate copolymer 39702-51-7, p-Chlorophenol, resorcinol, formaldehyde copolymer 58253-69-3, Formaldehyde Naphthol copolymer  
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
(**adhesion** promoters for cord-reinforced thermoplastics and substrate/thermoplastic composites)
- IT 1344-95-2, Calcium silicate  
RL: TEM (Technical or engineered material use); USES (Uses)  
(inert carrier; **adhesion** promoters for cord-reinforced thermoplastics and substrate/thermoplastic composites)

L71 ANSWER 6 OF 28 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 2004:513365 HCAPLUS  
DOCUMENT NUMBER: 141:73078

TITLE: Adhesion promoters of long chain  
esters for sealants and sealant compositions

INVENTOR(S): Klosowski, Jerome M.; Wentworth, Gary; Chen,  
Zhi; Semlow, Stephen; O'Rourke, Stephen;  
Stefanisin, Kimberly L.; English, John

PATENT ASSIGNEE(S): The C.P. Hall Company, USA

SOURCE: U.S. Pat. Appl. Publ., 22 pp., Cont.-in-part of  
U.S. Pat. Appl. 2004 2,563.  
CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

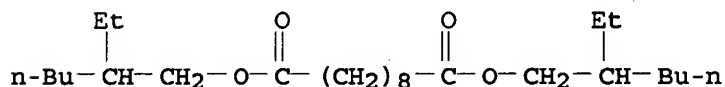
FAMILY ACC. NUM. COUNT: 8

PATENT INFORMATION:

← Applicant

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004122145	A1	20040624	US 2003-718233	20031119
US 2003220426	A1	20031127	US 2002-144229	20020510
US 6884832	B2	20050426		
US 2003220427	A1	20031127	US 2002-301770	20021121
US 2004002563	A1	20040101	US 2003-434616	20030509
US 6858664	B2	20050222		
US 2004002564	A1	20040101	US 2003-435212	20030509
US 2005194752	A1	20050908	US 2004-18790	20041220
PRIORITY APPLN. INFO.:			US 2002-144229	A2 20020510
			US 2002-301770	A2 20021121
			US 2003-434616	A2 20030509
			US 2003-435212	A2 20030509
			US 2003-718233	A2 20031119

- AB A sealant compn. comprises a sealant, an **adhesive resin**, and a long chain ester, particularly dimerate and trimerate esters, capable of unexpected **adhesion** to substrates such as ceramic substrates (e.g., concrete), glass substrates, metal substrates such as metal flat stock materials, elastic substrates including substrates comprising natural and/or synthetic rubbers, and substrates comprising **thermoplastic polymeric** materials, particularly for use in sealing around bathroom fixtures, in storage areas, vents, plumbing lines, flooring, wheel wells, and the like. For example, an **adhesion** promoter system utilizing a dry carrier, RX-13845, was prepd. by adding preheated Cyrez CRA 138 resin liq. to a dry carrier (Ca silicate) contained in a mixing bowl, followed by addn. of preheated RX-13804, a representative long chain ester.
- IT 122-62-3  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (long chain dimerate and trimerate ester **adhesion** promoters for improved bonding of sealants to various substrates)
- RN 122-62-3 HCAPLUS
- CN Decanedioic acid, bis(2-ethylhexyl) ester (9CI) (CA INDEX NAME)



- IC ICM C08K005-09
- INCL 524284000
- CC 42-11 (Coatings, Inks, and Related Products)  
 Section cross-reference(s): 38
- ST fatty acid ester **adhesion** promoter bonding sealant substrate
- IT Fatty acids, processes  
 RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)  
 (C18-unsatd., dimers and trimers, **adhesion** promoter precursor; long chain dimerate and trimerate ester **adhesion** promoters for improved bonding of sealants to various substrates)
- IT Epoxy resins, uses  
 Phenolic resins, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (**adhesive**; long chain dimerate and trimerate ester **adhesion** promoters for improved bonding of sealants to various substrates)
- IT Acrylic polymers, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (latex sealant; long chain dimerate and trimerate ester **adhesion** promoters for improved bonding of sealants to various substrates)
- IT **Adhesion** promoters  
**Adhesives**  
 Concrete  
 Sealing compositions

- (long chain dimerate and trimerate ester **adhesion** promoters for improved bonding of sealants to various substrates)
- IT EPDM rubber  
Fluoropolymers, miscellaneous  
Glass, miscellaneous  
RL: MSC (Miscellaneous)  
(long chain dimerate and trimerate ester **adhesion** promoters for improved bonding of sealants to various substrates)
- IT Aminoplasts  
RL: TEM (Technical or engineered material use); USES (Uses)  
(long chain dimerate and trimerate ester **adhesion** promoters for improved bonding of sealants to various substrates)
- IT Fatty acids, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(long-chain, esters; long chain dimerate and trimerate ester **adhesion** promoters for improved bonding of sealants to various substrates)
- IT Polyurethanes, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(polyether-, sealant; long chain dimerate and trimerate ester **adhesion** promoters for improved bonding of sealants to various substrates)
- IT Silicone rubber, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(sealant; long chain dimerate and trimerate ester **adhesion** promoters for improved bonding of sealants to various substrates)
- IT 9003-35-4, Phenol-formaldehyde copolymer 24969-11-7, Resorcinol-formaldehyde copolymer 25053-48-9, Butadiene-styrene-2-vinylpyridine copolymer 28410-58-4, Formaldehyde-resorcinol-triallyl cyanurate copolymer 39702-51-7, p-Chlorophenol-formaldehyde-resorcinol copolymer 58253-69-3, Naphthol-formaldehyde copolymer  
RL: TEM (Technical or engineered material use); USES (Uses)  
(**adhesive**; long chain dimerate and trimerate ester **adhesion** promoters for improved bonding of sealants to various substrates)
- IT 122-62-3 640724-45-4, RX-13845 640725-01-5, RX 13928  
RL: MOA (Modifier or additive use); USES (Uses)  
(long chain dimerate and trimerate ester **adhesion** promoters for improved bonding of sealants to various substrates)
- IT 9002-86-2, PVC 24937-79-9, Polyvinylidene fluoride  
RL: MSC (Miscellaneous)  
(long chain dimerate and trimerate ester **adhesion** promoters for improved bonding of sealants to various substrates)
- IT 9003-08-1, Cyrez CRA 138  
RL: TEM (Technical or engineered material use); USES (Uses)  
(long chain dimerate and trimerate ester **adhesion** promoters for improved bonding of sealants to various substrates)

L71 ANSWER 7 OF 28 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 2004:412988 HCAPLUS  
DOCUMENT NUMBER: 140:407547  
TITLE: Thermoplastic polymer powder  
INVENTOR(S): Kurihara, Toyooki; Hamada, Kenichi  
PATENT ASSIGNEE(S): Kuraray Co., Ltd., Japan

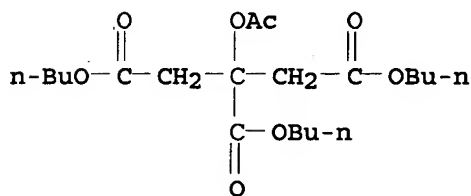
SOURCE: PCT Int. Appl., 39 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004041886	A1	20040521	WO 2003-JP13943	20031030
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1580206	A1	20050928	EP 2003-810586	20031030
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
PRIORITY APPLN. INFO.:			JP 2002-321927	A
			WO 2003-JP13943	20021106
				20031030

AB The present invention relates to a thermoplastic polymer powder which consists mainly of (A) an acrylic block copolymer comprising  $\geq 1$  acrylic ester polymer blocks and bonded thereto  $\geq 1$  polymer block selected among (B) methacrylic ester polymer blocks and (C) acrylic ester polymer blocks differing in structure from the blocks A, where the polymer powder has a complex dynamic viscosity  $\eta^*(5) \leq 5.0 + 103 \text{ Pa}\cdot\text{s}$  measured at  $250^\circ$  and oscillation frequency  $5 \text{ rad/s}$ , a Newtonian viscosity index  $n$  ( $n = \log \eta^*(5) - \log \eta^*(50)$ )  $\leq 0.50$ , and an av. particle diam.  $\leq 1 \text{ mm}$ , wherein  $\eta^*(5)$ ,  $\eta^*(50)$  = the complex dynamic viscosities (unit,  $\text{Pa}\cdot\text{s}$ ) measured at  $250^\circ$  and oscillation frequencies  $5$  and  $50 \text{ rad/s}$ , resp. The thermoplastic polymer powder is suitable for use in molding techniques employing a powder, such as slush molding and in powder coating. A molding, skin material, and the like which are excellent in weatherability, flexibility, mech. strength, low-temp. properties, adhesion to polar

resins, rubber elasticity, safety, etc. can be smoothly produced from the powder. Thus, 17.0 g Me methacrylate was polymd. in the presence of secondary butyllithium and iso-Bu bis(2,6-di-tert-butyl-4-methylphenoxy)aluminum, 79.0 g Bu acrylate was added therein and polymd., 17.0 g Me methacrylate was added therein and polymd. to give a triblock copolymer with Mw 77,000 and polydispersity 1.10, which was pulverized at -100° to give a thermoplastic polymer powder with complex viscosity 40.6 Pa-s at 5 rad/s and 40.5 Pa-s at 50 rad/s, Newtonian viscosity index 0.001, av. particle diam. 430 µm, melt viscosity 40 Pa-s, good slush moldability, tensile strength (sheet) 11.0 MPa, tensile elongation at break (sheet) 400%, and JIS A hardness (sheet) 65.

- IT 77-90-7, Acetyl citric acid, tributyl ester  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (plasticizer; prepn. of thermoplastic block copolymer powders)  
 RN 77-90-7 HCAPLUS  
 CN 1,2,3-Propanetricarboxylic acid, 2-(acetyloxy)-, tributyl ester  
 (9CI) (CA INDEX NAME)



- IC ICM C08F297-02  
 ICS C08L053-00; B29C041-04; B29C041-18  
 CC 37-3 (Plastics Manufacture and Processing)  
 ST thermoplastic polymer powder methyl methacrylate  
 butyl acrylate triblock copolymer  
 IT Acrylic polymers, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (block; prepn. of thermoplastic block copolymer powders)  
 IT Electric lamps  
 Electroluminescent devices  
 (covers; prepn. of thermoplastic block copolymer powders for lamp covers)  
 IT Molding of plastics and rubbers  
 (powder; prepn. of thermoplastic block copolymer powders)  
 IT Molded plastics, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (prepn. of thermoplastic block copolymer powders)  
 IT Plasticizers  
 (prepn. of thermoplastic block copolymer powders for lamp covers)  
 IT Toys  
 (prepn. of thermoplastic block copolymer powders for toy parts)  
 IT Molding of plastics and rubbers  
 (rotational; prepn. of thermoplastic block copolymer powders)  
 IT Molding of plastics and rubbers  
 (slush; prepn. of thermoplastic block copolymer powders)  
 IT Plastics, uses

RL: TEM (Technical or engineered material use); USES (Uses)  
(thermoplastics, powders; prepn. of thermoplastic block copolymer powders)

IT 9011-87-4, Methyl acrylate-methyl methacrylate copolymer  
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
(blend with block copolymer; prepn. of thermoplastic block copolymer powders)

IT 77-90-7, Acetyl citric acid, tributyl ester  
RL: MOA (Modifier or additive use); USES (Uses)  
(plasticizer; prepn. of thermoplastic block copolymer powders)

IT 108501-18-4P, Butyl acrylate-methyl methacrylate block copolymer 755000-11-4P  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(triblock, optionally blend with acrylic polymer; prepn. of thermoplastic block copolymer powders)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L71 ANSWER 8 OF 28 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 2004:20006 HCAPLUS  
DOCUMENT NUMBER: 140:78230  
TITLE: Heat-sensitive delayed-tack antiblocking adhesives containing no endocrine disruptors and their manufacture  
INVENTOR(S): Yasuda, Jun  
PATENT ASSIGNEE(S): The Inctec Inc., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004002772	A2	20040108	JP 2003-91061	20030328
PRIORITY APPLN. INFO.:				20020417

OTHER SOURCE(S): MARPAT 140:78230

AB Title adhesives contain aq. dispersions of thermoplastic resins with Tg -20 to 100°, trimethylolpropane tribenzoate (the benzene rings may be substituted with alkyl, OH, and/or NH<sub>2</sub>), and aq. dispersions. Thus, aq. dispersion contg. Polysol TI 3052 (styrene-acrylate ester copolymer) and NeoCryl BT 26 (styrene-acrylate ester copolymer) 35.00, trimethylolpropane tribenzoate 27.50, aq. soln. of SN dispersant 5045 (anionic surfactant) 22.50, and SE 50 (tackifier) 15.00 parts

were blended, applied on the back side of coated paper, heated at 120°, and bonded to a glass plate to show firm **adhesion** to the substrate.

IT 9003-63-8, Poly(butyl methacrylate)  
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
 (phthalate ester-free heat-sensitive delayed-tack antiblocking **adhesives** contg. trimethylolpropane tribenzoates)

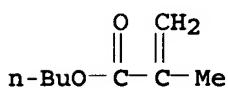
RN 9003-63-8 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, butyl ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 97-88-1

CMF C8 H14 O2



IC ICM C09J201-00

ICS C09J011-06

CC 38-3 (Plastics Fabrication and Uses)

ST antiblocking delayed tack **adhesive** trimethylolpropane tribenzoate; heat sensitive delayed tack **adhesive** thermoplastic; water thinned **adhesive** styrene acrylate copolymer

IT Plasticizers

(solid; phthalate ester-free heat-sensitive delayed-tack antiblocking **adhesives** contg. trimethylolpropane tribenzoates)

IT Plastics, uses

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(thermoplastics; phthalate ester-free heat-sensitive delayed-tack antiblocking **adhesives** contg. trimethylolpropane tribenzoates)

IT **Adhesives**

(water-thinned, delayed-tack; phthalate ester-free heat-sensitive delayed-tack antiblocking **adhesives** contg. trimethylolpropane tribenzoates)

IT 24937-78-8, Ethylene-vinyl acetate copolymer

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(Vinysol 1412S; phthalate ester-free heat-sensitive delayed-tack antiblocking **adhesives** contg. trimethylolpropane tribenzoates)

IT 74-85-1D, Ethylene, polymers with acrylate esters 79-10-7D, Acrylic acid, esters, polymers 100-42-5D, Styrene, polymers with acrylate esters 108-05-4D, Vinyl acetate, polymers with acrylate esters 9003-20-7, Poly(vinyl acetate) 9003-55-8, Butadiene-styrene copolymer 9003-63-8, Poly(butyl methacrylate) 9011-06-7, Vinyl chloride-vinylidene chloride

copolymer 25037-78-9, Ethylene-vinyl chloride copolymer  
 25086-29-7, Styrene-vinylpyrrolidone copolymer 299926-27-5,  
 Polysol TI 3052 316354-55-9, NeoCryl BT 26  
 RL: POF (Polymer in formulation); TEM (Technical or engineered  
 material use); USES (Uses)

(phthalate ester-free heat-sensitive delayed-tack antiblocking  
**adhesives** contg. trimethylolpropane tribenzoates)

IT 54547-34-1, Trimethylolpropane tribenzoate  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (solid plasticizer; phthalate ester-free heat-sensitive  
 delayed-tack antiblocking **adhesives** contg.  
 trimethylolpropane tribenzoates)

L71 ANSWER 9 OF 28 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2001:798359 HCAPLUS  
 DOCUMENT NUMBER: 135:319419  
 TITLE: Polyurethane hot-melt **adhesives** with  
 acrylic **copolymers** and  
 thermoplastic resins  
 INVENTOR(S): Chu, Wayne K.  
 PATENT ASSIGNEE(S): Imperial Chemical Industries PLC, USA  
 SOURCE: PCT Int. Appl., 51 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001081495	A2	20011101	WO 2001-US12719	20010418
WO 2001081495	A3	20020221		
W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6482878	B1	20021119	US 2000-556721	20000421
EP 1307495	A2	20030507	EP 2001-927206	20010418
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2003531271	T2	20031021	JP 2001-578571	20010418

PRIORITY APPLN. INFO.: US 2000-556721 A

200004  
21

WO 2001-US12719

W

200104  
18

AB Solvent-free moisture-curable 1-part hot-melt polyurethane adhesive or sealant compns. are solid at room temp. The polyurethane adhesive or sealant compn. comprises (a) .apprx.20-75% urethane prepolymer, (b) .apprx.1-66% reactive, hydroxyl-contg., or a nonreactive polymer formed from ethylenically unsatd. monomers, and (c) .apprx.20-75% thermoplastic resin such as EVA. The polyurethane adhesive or sealant compn. comprises (a) .apprx.10-90% urethane prepolymer, and (b) .apprx.5-90% thermoplastic resin which is an ethylene vinyl-acetate/ethylene acrylate terpolymer. An example adhesive contained polypropylene glycol 81, Bu methacrylate-2-hydroxyethyl methacrylate-methacrylic acid-Me methacrylate copolymer 35, rosin ester tackifier, EVA 60, acrylic acid-ethylene-vinyl acetate copolymer 23, MDI 40, and catalyst 1-part.

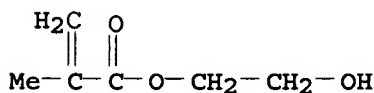
IT 35227-05-5, Butyl methacrylate-2-hydroxyethyl methacrylate-methacrylic acid-methyl methacrylate copolymer.  
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
(hot-melt adhesives of polyurethane with acrylic copolymers and/or thermoplastic resins)

RN 35227-05-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with butyl 2-methyl-2-propenoate, 2-hydroxyethyl 2-methyl-2-propenoate and methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

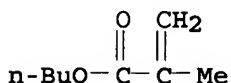
CM 1

CRN 868-77-9  
CMF C6 H10 O3

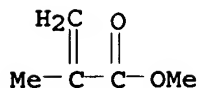


CM 2

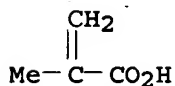
CRN 97-88-1  
CMF C8 H14 O2



CM 3

CRN 80-62-6  
CMF C5 H8 O2

CM 4

CRN 79-41-4  
CMF C4 H6 O2

IC ICM C09J175-04  
 CC 38-3 (Plastics Fabrication and Uses)  
 Section cross-reference(s): 37, 42  
 ST urethane prepolymer moisture curable hot melt **adhesive**;  
 EVA moisture curable hot melt **adhesive**; acrylic polymer  
 hot melt **adhesive**  
 IT Interpenetrating polymer networks  
 Sealing compositions  
 (hot-melt **adhesives** of polyurethane with acrylic  
 copolymers and/or **thermoplastic resins**)  
 IT **Adhesives**  
 (hot-melt; hot-melt **adhesives** of polyurethane with  
 acrylic copolymers and/or **thermoplastic resins**  
 )  
 IT Polyurethanes, uses  
 RL: POF (Polymer in formulation); TEM (Technical or engineered  
 material use); USES (Uses)  
 (polyether-; hot-melt **adhesives** of polyurethane with  
 acrylic copolymers and/or **thermoplastic resins**  
 )  
 IT 74-85-1D, Ethylene, copolymer with vinyl acetate and acrylate  
 79-10-7D, Acrylic acid, esters, copolymer with ethylene and vinyl  
 acetate 108-05-4D, Vinyl acetate, copolymer with ethylene and  
 acrylate 9048-57-1, MDI-polypropylene glycol copolymer  
 24937-78-8, EVA 25750-84-9, Butyl acrylate-ethylene copolymer  
 26713-18-8, Acrylic acid-ethylene-vinyl acetate copolymer  
 35227-05-5, Butyl methacrylate-2-hydroxyethyl  
 methacrylate-methacrylic acid-methyl methacrylate copolymer  
 368886-29-7  
 RL: POF (Polymer in formulation); TEM (Technical or engineered  
 material use); USES (Uses)  
 (hot-melt **adhesives** of polyurethane with acrylic

copolymers and/or thermoplastic resins)

L71 ANSWER 10 OF 28 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2001:472809 HCAPLUS

DOCUMENT NUMBER: 135:77885

TITLE: Ambient-temperature-stable, one-part curable epoxy adhesive

INVENTOR(S): Brandys, Frank A.; Irwin, Michael J.; Tarbutton, Kent S.

PATENT ASSIGNEE(S): 3M Innovative Properties Company, USA

SOURCE: PCT Int. Appl., 50 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001046290	A1	20010628	WO 2000-US31610	20001117
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1252217	A1	20021030	EP 2000-983719	20001117
EP 1252217	B1	20040818		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2003518177	T2	20030603	JP 2001-547195	20001117
US 2002076566	A1	20020620	US 2001-10690	20011109
US 6506494	B2	20030114		
PRIORITY APPLN. INFO.:			US 1999-467855	A 19991220
			WO 2000-US31610	W 20001117

OTHER SOURCE(S): MARPAT 135:77885

AB The adhesive comprises curable epoxy resin, a latent curative system comprising (a) at least one first curative such as dicyandiamide (derivs.) encapsulated in thermoplastic polymeric (e.g., PMMA) microcapsules and (b) a second latent curative such as a metal imidazolate accelerator admixed in the curable epoxy resin, and sufficient particulate thermoplastic polymeric material to at least partially regionally plasticize the cured epoxy resin wherein the amt. of the particulate thermoplastic polymeric material may be provided by the walls of the microcapsules. A method of curing the adhesive by heating the compn. is also provided. A joint made by adhering members together with the adhesive compn. and a method of making the joint are also provided.

IT 25608-33-7, Butyl methacrylate-methyl methacrylate copolymer  
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)

(ambient-temp.-stable, one-part curable epoxy adhesives contg. thermoplastic polymer plasticizer-encapsulated crosslinkers and metal imidazolate latent crosslinking catalysts)

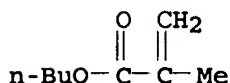
RN 25608-33-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, butyl ester, polymer with methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 97-88-1

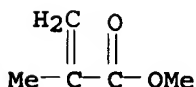
CMF C8 H14 O2



CM 2

CRN 80-62-6

CMF C5 H8 O2



IC ICM C08G059-18

ICS C09J163-00; C08J003-24

CC 38-3 (Plastics Fabrication and Uses)

ST one part thermally curable room temp stable epoxy adhesive; metal imidazolate latent catalyst crosslinking epoxy adhesive; PMMA encapsulated crosslinker epoxy adhesive; dicyandiamide thermoplastic polymer encapsulated crosslinker epoxy adhesive;

latent curing compn epoxy adhesive; thermoplastic  
polymer plasticizer encapsulated crosslinker epoxy  
adhesive

- IT **Adhesives**  
Crosslinking agents  
Microcapsules  
(ambient-temp.-stable, one-part curable epoxy adhesives  
contg. thermoplastic polymer  
plasticizer-encapsulated crosslinkers and metal imidazolate  
latent crosslinking catalysts)
- IT Epoxy resins, uses  
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical  
or engineered material use); USES (Uses)  
(ambient-temp.-stable, one-part curable epoxy adhesives  
contg. thermoplastic polymer  
plasticizer-encapsulated crosslinkers and metal imidazolate  
latent crosslinking catalysts)
- IT Crosslinking catalysts  
(latent; ambient-temp.-stable, one-part curable epoxy  
adhesives contg. thermoplastic polymer  
plasticizer-encapsulated crosslinkers and metal imidazolate  
latent crosslinking catalysts)
- IT 14489-15-7P, Copper (II) imidazolate 17339-44-5P, Zinc imidazolate  
42879-93-6P, Silver imidazolate  
RL: CAT (Catalyst use); IMF (Industrial manufacture); PREP  
(Preparation); USES (Uses)  
(ambient-temp.-stable, one-part curable epoxy adhesives  
contg. thermoplastic polymer  
plasticizer-encapsulated crosslinkers and metal imidazolate  
latent crosslinking catalysts)
- IT 9011-14-7, PMMA 25086-15-1, Methacrylic acid-methyl methacrylate  
copolymer 25608-33-7, Butyl methacrylate-methyl  
methacrylate copolymer  
RL: MOA (Modifier or additive use); TEM (Technical or engineered  
material use); USES (Uses)  
(ambient-temp.-stable, one-part curable epoxy adhesives  
contg. thermoplastic polymer  
plasticizer-encapsulated crosslinkers and metal imidazolate  
latent crosslinking catalysts)
- IT 288-32-4, Imidazole, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(ambient-temp.-stable, one-part curable epoxy adhesives  
contg. thermoplastic polymer  
plasticizer-encapsulated crosslinkers and metal imidazolate  
latent crosslinking catalysts)
- IT 346712-52-5P 346712-53-6P 346712-54-7P 347162-80-5P  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP  
(Properties); TEM (Technical or engineered material use); PREP  
(Preparation); USES (Uses)  
(cured adhesive; ambient-temp.-stable, one-part curable  
epoxy adhesives contg. thermoplastic  
polymer plasticizer-encapsulated crosslinkers and metal  
imidazolate latent crosslinking catalysts)

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR  
THIS RECORD. ALL CITATIONS AVAILABLE IN  
THE RE FORMAT

L71 ANSWER 11 OF 28 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 2000:866457 HCAPLUS  
DOCUMENT NUMBER: 134:30021  
TITLE: **Thermoplastic resin**  
compositions having good **adhesion** to  
polar **polymers** and molded article  
therefrom  
INVENTOR(S): Yamada, Tomohisa; Sugiura, Motoyuki  
PATENT ASSIGNEE(S): Nippon Oil and Fats Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000344959	A2	20001212	JP 1999-157807	199906 04
PRIORITY APPLN. INFO.:				JP 1999-157807 199906 04

AB Title compn. comprise (1) 50-99% nonpolar  $\alpha$ -olefin-type **thermoplastic resins** and (2) 1-50% multiphase graft copolymers comprising 5-99% copolymer segments obtained from nonpolar  $\alpha$ -olefin monomers and polar vinyl monomers and 1-95% vinyl (co)polymer segments, where one of the segments are dispersed in the other segments with particle size 0.001-10  $\mu$ m. Thus, 950 g J-Allomer PM 671A (polypropylene) and 50 g graft copolymer obtained from NUC 3150 (ethylene-vinyl acetate copolymer) 800 and Me methacrylate 200, and tert-butylperoxy(methacryloxyethyl)carbonate 4 g (av. mol. wt. 100,000, graft efficiency 75%, and dispersed particle size 0.3-0.4  $\mu$ m) were dry blended, extruded and injection molded at 210° to give a test piece showing heat-distortion temp. (JIS K 7207) 75°, Delpet 560F [poly(Me methacrylate)] was injection molded onto it to give a composite molded product showing bending strength (JIS K 7203) 50 kg/cm<sup>2</sup>.

IT 310455-36-8P 310903-32-3P, Butyl methacrylate-Rexpearl RA 3150 graft copolymer  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(prepn. of thermoplastic compns. having good **adhesion** to polar **polymers**)

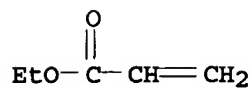
RN 310455-36-8 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, butyl ester, polymer with ethene and ethyl 2-propenoate, graft (9CI) (CA INDEX NAME)

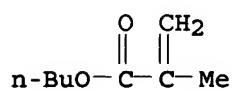
CM 1

CRN 140-88-5

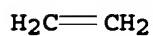
CMF C5 H8 O2



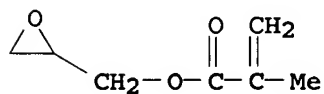
CM 2

CRN 97-88-1  
CMF C8 H14 O2

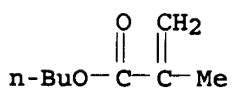
CM 3

CRN 74-85-1  
CMF C2 H4RN 310903-32-3 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, butyl ester, polymer with ethene and  
oxiranylmethyl 2-methyl-2-propenoate, graft (9CI) (CA INDEX NAME)

CM 1

CRN 106-91-2  
CMF C7 H10 O3

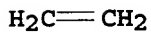
CM 2

CRN 97-88-1  
CMF C8 H14 O2

CM 3

CRN 74-85-1

CMF C2 H4



- IC ICM C08L023-00  
ICS C08J005-00; C08L023-00; C08L051-00
- CC 37-6 (Plastics Manufacture and Processing)  
Section cross-reference(s): 38
- ST thermoplastic polyolefin vinyl graft polymer blend; molded plastic  
thermoplastic polar polymer composite
- IT Vinyl compounds, preparation  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM  
(Technical or engineered material use); PREP (Preparation); USES  
(Uses)  
(graft polymers, with olefins; prepn. of thermoplastic compns.  
having good **adhesion** to polar **polymers**)
- IT Polyolefins  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM  
(Technical or engineered material use); PREP (Preparation); USES  
(Uses)  
(optionally graft polymers with vinyl compds.; prepn. of  
thermoplastic compns. having good **adhesion** to polar  
**polymers**)
- IT Molded plastics, uses  
RL: POF (Polymer in formulation); TEM (Technical or engineered  
material use); USES (Uses)  
(prepn. of thermoplastic compns. having good **adhesion**  
to polar **polymers**)
- IT Polymer blends  
RL: TEM (Technical or engineered material use); USES (Uses)  
(prepn. of thermoplastic compns. having good **adhesion**  
to polar **polymers**)
- IT Plastics, uses  
RL: POF (Polymer in formulation); TEM (Technical or engineered  
material use); USES (Uses)  
(thermoplastics; prepn. of thermoplastic compns. having good  
**adhesion** to polar **polymers**)
- IT 9011-14-7, Delpet 560F  
RL: TEM (Technical or engineered material use); USES (Uses)  
(polar polymer; prepn. of thermoplastic compns. having good  
**adhesion** to polar **polymers**)
- IT 106392-13-6P, Ethylene-methyl methacrylate-vinyl acetate graft  
copolymer 115528-82-0P 118497-07-7P 155015-73-9P, Yukalon  
EAA-A 500W-methyl methacrylate graft copolymer 310455-36-8P  
310903-32-3P, Butyl methacrylate-Rexpearl RA 3150 graft  
copolymer 310903-33-4P  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM  
(Technical or engineered material use); PREP (Preparation); USES  
(Uses)

(prepn. of thermoplastic compns. having good adhesion  
to polar polymers)

IT 9003-07-0, J-Allomer PM 671A

RL: POF (Polymer in formulation); TEM (Technical or engineered  
material use); USES (Uses)

(prepn. of thermoplastic compns. having good adhesion  
to polar polymers)

L71 ANSWER 12 OF 28 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:383722 HCAPLUS

DOCUMENT NUMBER: 133:18926

TITLE: Rubber-erasable aqueous ink composition for  
writing material and writing materials using  
inks

INVENTOR(S): Kito, Tsutomu; Hayashi, Hiroyuki; Nakamura,  
Hiroyuki

PATENT ASSIGNEE(S): The Pilot Ink Co., Ltd., Japan

SOURCE: Eur. Pat. Appl., 40 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1006162	A1	20000607	EP 1999-123940	199912 03
EP 1006162	B1	20030903		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
CA 2291567	AA	20000603	CA 1999-2291567	199912 02
KR 2000047855	A	20000725	KR 1999-54391	199912 02
JP 2001019888	A2	20010123	JP 1999-342877	199912 02
US 6498203	B1	20021224	US 1999-453477	199912 02
CN 1256294	A	20000614	CN 1999-125562	199912 03
TW 524833	B	20030321	TW 1999-88121154	199912 03
JP 2001019889	A2	20010123	JP 2000-133429	200005 02
PRIORITY APPLN. INFO.:			JP 1998-361897	A 199812

03

JP 1999-126455

A

199905

06

JP 1999-126456

A

199905

06

AB A rubber-erasable aq. ink for a writing material (ball point pen, fountain pen, marking pen, etc.) contains H<sub>2</sub>O, a water-sol. polar solvent, and a particulate **adhesive** colored resin, optionally a **thermoplastic resin** for permanent fixability when heated. The particulate **adhesive** colored resin contains a pigment and an **adhesive resin** which is **adhesive** on at least a part of a surface. The particulate **adhesive** colored resin has a particle diam. distribution such that the amt. of particles having a particle diam. 2-20  $\mu$ m is  $\geq 70\%$  by wt. of all the particles. Thus, an example ink (viscosity 5.8 MPa-s) contained a dispersion of C black in Bu acrylate-styrene copolymer (glass transition temp. 8°; av. particle diam. 8.2  $\mu$ m), ethylene glycol, penetrant, and H<sub>2</sub>O.

IT 73165-18-1

RL: TEM (Technical or engineered material use); USES (Uses)

(colored **adhesive** dispersion; rubber-erasable aq.

colored ink compn. for writing pens on paper)

RN 73165-18-1 HCAPLUS

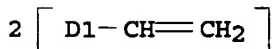
CN 2-Propenoic acid, 2-methyl-, butyl ester, polymer with diethenylbenzene and 2-ethylhexyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 1321-74-0

CMF C10 H10

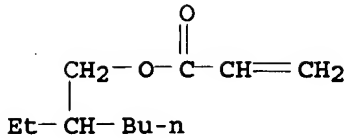
CCI IDS



CM 2

CRN 103-11-7

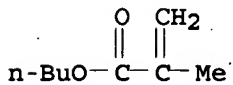
CMF C11 H20 O2



CM 3

CRN 97-88-1

CMF C8 H14 O2



IC ICM C09D011-18  
ICS C09D011-16

CC 42-12 (Coatings, Inks, and Related Products)

ST rubber erasable aq ink; pen ink aq rubber erasable

IT Polyesters, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(colored adhesive dispersion; rubber-erasable aq.  
colored ink compn. for writing pens on paper)

IT Pens  
(marking; rubber-erasable aq. colored ink compn. for writing pens  
on paper)

IT Ball-point pens  
(rubber-erasable aq. colored ink compn. for writing pens on  
paper)

IT Inks  
(water-thinned; rubber-erasable aq. colored ink compn. for  
writing pens on paper)

IT 9003-53-6, Polystyrene 25085-99-8, Bisphenol A diglycidyl ether  
polymer 25767-47-9, Butyl acrylate-styrene copolymer 25777-71-3,  
Ethylene glycol dimethacrylate-methyl methacrylate copolymer  
34150-22-6, Butyl acrylate-ethylene glycol dimethacrylate-methyl  
methacrylate copolymer 54335-15-8, Butyl acrylate-ethyl  
methacrylate copolymer 57383-08-1 57383-09-2 60806-47-5, Butyl  
acrylate-divinylbenzene-styrene copolymer 73165-18-1  
85884-66-8, Butyl acrylate-maleic acid-styrene copolymer  
110877-66-2, Butyl acrylate-1,6-hexanediol diacrylate-styrene  
copolymer 272456-34-5, Butyl acrylate-divinylbenzene-ethyl  
methacrylate copolymer  
RL: TEM (Technical or engineered material use); USES (Uses)  
(colored adhesive dispersion; rubber-erasable aq.  
colored ink compn. for writing pens on paper)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR  
THIS RECORD. ALL CITATIONS AVAILABLE IN  
THE RE FORMAT

L71 ANSWER 13 OF 28 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1998:661955 HCAPLUS  
 DOCUMENT NUMBER: 129:277230  
 TITLE: Heat-sensitive **adhesives** with good  
 antiblocking property and printability and their  
 sheets  
 INVENTOR(S): Ohashi, Hiroyuki; Suzuki, Kenji  
 PATENT ASSIGNEE(S): Oji Paper Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10273640	A2	19981013	JP 1997-77890	199703 28
PRIORITY APPLN. INFO.:				JP 1997-77890 199703 28

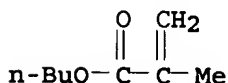
AB Title sheets have layers contg. the **adhesives** contg. solid plasticizers and 55/45-98/2 mixts. of **thermoplastic polymers** with glass transition temp. (Tg) 60-150° and **thermoplastic resins** with Tg (-30)-30°. Thus, a sheet having a layer comprising Et acrylate-styrene copolymer 72, 2-ethylhexyl acrylate-Me methacrylate-styrene copolymer 28, and dicyclohexyl phthalate 150 parts showed good antiblocking property and printability.

IT 9003-63-8, Butyl methacrylate homopolymer  
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (heat-sensitive **thermoplastic polymer adhesives** with good antiblocking property and printability)

RN 9003-63-8 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, butyl ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 97-88-1  
 CMF C8 H14 O2



IC ICM C09J201-00  
 ICS C09J007-02; C09J125-04; C09J127-06; C09J131-04; C09J133-04;

C09J155-00

- CC 38-3 (Plastics Fabrication and Uses)
- ST heat sensitive **adhesive thermoplastic polymer** blend; acrylic polymer blend **adhesive heat sensitive**; vinyl acetate polymer **adhesive heat sensitive**; styrene polymer blend **adhesive heat sensitive**; ethylene polymer blend **adhesive heat sensitive**; chloride vinyl polymer **adhesive heat sensitive**; isoprene polymer blend **adhesive heat sensitive**; butadiene polymer blend **adhesive heat sensitive**; acrylonitrile polymer blend **adhesive heat sensitive**
- IT Glass transition temperature  
(heat-sensitive **thermoplastic polymer adhesives** with good antiblocking property and printability)
- IT Polymer blends  
RL: PRP (Properties); TEM (Technical or engineered material use);  
USES (Uses)  
(heat-sensitive **thermoplastic polymer adhesives** with good antiblocking property and printability)
- IT Plasticizers  
(solid; heat-sensitive **thermoplastic polymer adhesives** with good antiblocking property and printability)
- IT Plastics, uses  
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
(**thermoplastics; heat-sensitive thermoplastic polymer adhesives** with good antiblocking property and printability)
- IT **Adhesives**  
(thermosetting; heat-sensitive **thermoplastic polymer adhesives** with good antiblocking property and printability)
- IT 9003-18-3, Acrylonitrile-butadiene copolymer 9003-20-7, Vinyl acetate homopolymer 9003-53-6, Styrene homopolymer 9003-55-8, Butadiene-styrene copolymer 9003-63-8, Butyl methacrylate homopolymer 24937-78-8, Ethylene-vinyl acetate copolymer 25037-78-9, Ethylene-vinyl chloride copolymer 25038-32-8, Isoprene-styrene copolymer 25066-97-1, Ethyl acrylate-styrene copolymer 25068-12-6, Ethylene-styrene copolymer 25085-46-5, Ethylene-vinyl acetate-vinyl chloride copolymer 25750-06-5, 2-Ethylhexyl acrylate-methyl methacrylate-styrene copolymer 26006-94-0, Ethylene-styrene-vinyl acetate copolymer  
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
(heat-sensitive **thermoplastic polymer adhesives** with good antiblocking property and printability)
- IT 84-61-7, Dicyclohexyl phthalate  
RL: MOA (Modifier or additive use); USES (Uses)  
(plasticizers; heat-sensitive **thermoplastic polymer adhesives** with good antiblocking property and printability)

L71 ANSWER 14 OF 28 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1998:94904 HCAPLUS  
DOCUMENT NUMBER: 128:181413  
TITLE: Glossy in-mold moldings from thermoplastics and  
acrylic film-decorative thin films laminated  
with acrylic syrups  
INVENTOR(S): Nakagawa, Kazuhiko; Tanuki, Yoshiteru; Konishi,  
Hideo  
PATENT ASSIGNEE(S): Mitsubishi Rayon Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10034838	A2	19980210	JP 1996-205464	199607 17
PRIORITY APPLN. INFO.:				JP 1996-205464 199607 17

AB Laminated title moldings are obtained by bonding (1) acrylic films and (2) decorative thin films with (3) acrylic syrups comprising (A) 35-75 parts (meth)acrylic acid esters and 25-65 parts (B) polymers and/or (C) oligomers which are sol. in A (A + B + C = 100 parts) and in-mold molding of the resulting laminates with thermoplastic resins. Thus, 100 parts of an acrylic syrup with viscosity at 20° 450 cP, obtained by dissolving 40 parts 60:40 Me methacrylate (I)-Bu methacrylate copolymer in 30 parts I and 30 parts 2-ethylhexyl methacrylate, was mixed with 2 parts Perkadox 16, impregnated into a sliced veneer, laminated on a film of Hipet HBS 001 on a glass plate, topped with a releasing paper-bonded glass plate, and set at 70°. Then the laminate was heated at 130°, vacuum-formed, and laminated with an injection-molded Diapet ABS Bulksam TM 20 (imide-modified ABS resin) to give test pieces showing 60° gloss 145 and JIS K 5400 cross-cut adhesion 100/100.

IT 25608-33-7, Butyl methacrylate-methyl methacrylate copolymer  
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
(glossy in-mold moldings of thermoplastics and acrylic film-decorative thin films laminated with acrylic syrup binders, contg.)

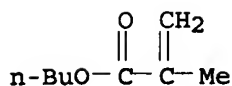
RN 25608-33-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, butyl ester, polymer with methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

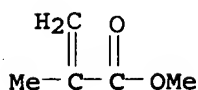
CRN 97-88-1

CMF C8 H14 O2

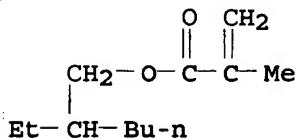


CM 2

CRN 80-62-6  
CMF C5 H8 O2



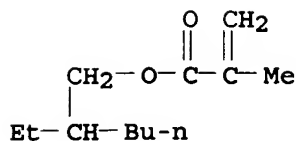
IT 688-84-6  
RL: TEM (Technical or engineered material use); USES (Uses)  
(glossy in-mold moldings of thermoplastics and acrylic  
film-decorative thin films laminated with acrylic syrup binders  
contg.)  
RN 688-84-6 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, 2-ethylhexyl ester (9CI) (CA INDEX  
NAME)



IT 140477-67-4P, Butyl methacrylate-2-ethylhexyl  
methacrylate-methyl methacrylate copolymer  
RL: PNU (Preparation, unclassified); PRP (Properties); TEM  
(Technical or engineered material use); PREP (Preparation); USES  
(Uses)  
(syrup, impregnated in veneer; glossy in-mold moldings of  
thermoplastics and acrylic film-decorative thin films laminated  
with acrylic syrup binders)  
RN 140477-67-4 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, butyl ester, polymer with 2-ethylhexyl  
2-methyl-2-propenoate and methyl 2-methyl-2-propenoate (9CI) (CA  
INDEX NAME)

CM 1

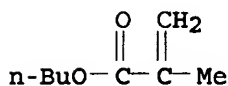
CRN 688-84-6  
CMF C12 H22 O2



CM 2

CRN 97-88-1

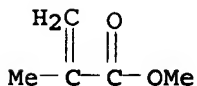
CMF C8 H14 O2



CM 3

CRN 80-62-6

CMF C5 H8 O2



IC ICM B32B027-30

CC 38-3 (Plastics Fabrication and Uses)

ST acrylic film laminate acrylic syrup binder; thermoplastic acrylic film in mold molding; ABS resin acrylic film laminate binder; methyl methacrylate acrylic syrup laminate binder; **adhesive** acrylic polymer in mold molding; ethylhexyl methacrylate acrylic syrup laminate binder; veneer acrylic polymer decorative film laminate

IT Epoxy resins, uses

RL: PNU (Preparation, unclassified); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(acrylic, syrups, impregnated in veneer; glossy in-mold moldings from thermoplastics and acrylic film-decorative thin films laminated with acrylic syrup binders)

IT Construction materials

(decorative panels; glossy in-mold moldings from thermoplastics and acrylic film-decorative thin films laminated with acrylic syrup binders)

IT Laminated plastics, uses

RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(decorative; glossy in-mold moldings from thermoplastics and acrylic film-decorative thin films laminated with acrylic syrup

binders)

IT Binders  
Molding of plastics and rubbers  
Syrups (sweetening agents)  
(glossy in-mold moldings from thermoplastics and acrylic  
film-decorative thin films laminated with acrylic syrup binders)

IT Polycarbonates, uses  
Polyoxyphenylenes  
RL: PEP (Physical, engineering or chemical process); PRP  
(Properties); TEM (Technical or engineered material use); PROC  
(Process); USES (Uses)  
(glossy in-mold moldings from thermoplastics and acrylic  
film-decorative thin films laminated with acrylic syrup binders)

IT Epoxy resins, uses  
RL: PNU (Preparation, unclassified); POF (Polymer in formulation);  
PRP (Properties); TEM (Technical or engineered material use); PREP  
(Preparation); USES (Uses)  
(methacrylates, methacrylates; glossy in-mold moldings from  
thermoplastics and acrylic film-decorative thin films laminated  
with acrylic syrup binders contg.)

IT Epoxy resins, uses  
RL: PNU (Preparation, unclassified); POF (Polymer in formulation);  
PRP (Properties); TEM (Technical or engineered material use); PREP  
(Preparation); USES (Uses)  
(methacrylates; glossy in-mold moldings from thermoplastics and  
acrylic film-decorative thin films laminated with acrylic syrup  
binders contg.)

IT Adhesives  
(syrups, impregnated in veneer; glossy in-mold moldings from  
thermoplastics and acrylic film-decorative thin films laminated  
with acrylic syrup binders)

IT Veneers  
(wood; glossy in-mold moldings from thermoplastics and acrylic  
film-decorative thin films laminated with acrylic syrup binders)

IT 9011-14-7, Hipet HBS 001  
RL: PEP (Physical, engineering or chemical process); PRP  
(Properties); TEM (Technical or engineered material use); PROC  
(Process); USES (Uses)  
(films; glossy in-mold moldings of thermoplastics and acrylic  
film-decorative thin films laminated with acrylic syrup binders)

IT 183510-41-0, Lemalloy B 60HT  
RL: PEP (Physical, engineering or chemical process); PRP  
(Properties); TEM (Technical or engineered material use); PROC  
(Process); USES (Uses)  
(glossy in-mold moldings from thermoplastics and acrylic  
film-decorative thin films laminated with acrylic syrup binders)

IT 203340-35-6P  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP  
(Properties); TEM (Technical or engineered material use); PREP  
(Preparation); USES (Uses)  
(glossy in-mold moldings of thermoplastics and acrylic  
film-decorative thin films laminated with acrylic syrup binders  
contg.)

IT 25608-33-7, Butyl methacrylate-methyl methacrylate copolymer  
RL: POF (Polymer in formulation); TEM (Technical or engineered  
material use); USES (Uses)

(glossy in-mold moldings of thermoplastics and acrylic film-decorative thin films laminated with acrylic syrup binders contg.)

IT 80-62-6 688-84-6

RL: TEM (Technical or engineered material use); USES (Uses)  
(glossy in-mold moldings of thermoplastics and acrylic film-decorative thin films laminated with acrylic syrup binders contg.)

IT 103-11-7

RL: TEM (Technical or engineered material use); USES (Uses)  
(in syrups; glossy in-mold moldings of thermoplastics and acrylic film-decorative thin films laminated with acrylic syrup binders)

IT 9003-56-9, ABS resin

RL: PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(laminate with, Diapet ABS Bulksam TM 20; glossy in-mold moldings of thermoplastics and acrylic film-decorative thin films laminated with acrylic syrup binders)

IT 94556-01-1, Iupilon S 100 183510-93-2, Daiyaaroi TS 6

RL: PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(laminate with; glossy in-mold moldings of thermoplastics and acrylic film-decorative thin films laminated with acrylic syrup binders)

IT 73061-77-5P, Epon 1004-2-Ethylhexyl acrylate-Methacrylic acid-Methyl methacrylate copolymer

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(syrup, impregnated in veneer; glossy in-mold moldings of thermoplastics and acrylic film-decorative thin films laminated with acrylic syrup binders)

IT 140477-67-4P, Butyl methacrylate-2-ethylhexyl methacrylate-methyl methacrylate copolymer

RL: PNU (Preparation, unclassified); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(syrup, impregnated in veneer; glossy in-mold moldings of thermoplastics and acrylic film-decorative thin films laminated with acrylic syrup binders)

L71 ANSWER 15 OF 28 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1997:368976 HCAPLUS

DOCUMENT NUMBER: 127:36016

TITLE: Durable antifogging acrylic compositions with good adhesion to thermoplastic resin moldings

INVENTOR(S): Onishi, Shunichi; Momohira, Satoru; Kinoshita, Kazuya; Obayashi, Atsushi

PATENT ASSIGNEE(S): Mitsubishi Kasei Vinyl K. K., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09087615	A2	19970331	JP 1995-243067	19950921
JP 2980010	B2	19991122	JP 1995-243067	19950921

PRIORITY APPLN. INFO.:

AB Title compns., having excellent antifogging effect, comprise (A) aq. dispersions of hydrophobic acrylic resins with Tg 35-80°, (B) inorg. colloidal sol, and (C) 0.01-30 parts (vs. 100 parts solids B) water-sol. inorg. Cl compds. Thus, an aq. dispersion of 40:60 Bu methacrylate-Me methacrylate copolymer (Tg 65°) was mixed with colloidal SiO2 sol, HCl, and 3:1 H2O-EtOH mixt., and coated on a polyethylene film to show good adhesive strength, and excellent initial and durable antifogging properties.

IT 25608-33-7P, Butyl methacrylate-methyl methacrylate copolymer  
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (durable antifogging acrylic compns. with good adhesion to thermoplastic resin moldings)

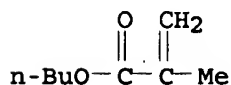
RN 25608-33-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, butyl ester, polymer with methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 97-88-1

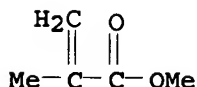
CMF C8 H14 O2



CM 2

CRN 80-62-6

CMF C5 H8 O2



IC ICM C09K003-18

ICS C08K003-00; C08L033-06

CC 42-7 (Coatings, Inks, and Related Products)  
ST antifogging acrylic coating silica colloidal sol; chloride silica ac  
acrylic coating antifogging; methacrylate copolymer coating  
antifogging durability  
IT Antifogging agents  
(coatings; durable antifogging acrylic compns. with good  
adhesion to thermoplastic resin  
moldings)  
IT Acrylic polymers, uses  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical  
or engineered material use); PREP (Preparation); USES (Uses)  
(hydrophobic; durable antifogging acrylic compns. with good  
adhesion to thermoplastic resin  
moldings)  
IT Coating materials  
(water-thinned; durable antifogging acrylic compns. with good  
adhesion to thermoplastic resin  
moldings)  
IT 1344-28-1, Alumina, uses 7631-86-9, Silica, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(colloidal sol; durable antifogging acrylic compns. with good  
adhesion to thermoplastic resin  
moldings)  
IT 25585-75-5P, Acrylic acid-ethyl acrylate-methyl methacrylate-styrene  
copolymer 25608-33-7P, Butyl methacrylate-methyl  
methacrylate copolymer 38622-62-7P, Acrylic acid-2-ethylhexyl  
acrylate-2-hydroxyethyl methacrylate-methyl methacrylate copolymer  
40530-01-6P, Acrylic acid-acrylonitrile-2-ethylhexyl  
acrylate-styrene copolymer 52030-79-2P, Acrylic acid-ethyl  
acrylate-2-hydroxyethyl methacrylate-methyl methacrylate-styrene  
copolymer 113736-45-1P 114167-11-2P 114167-12-3P  
114189-59-2P 114189-60-5P 114206-04-1P  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical  
or engineered material use); PREP (Preparation); USES (Uses)  
(durable antifogging acrylic compns. with good adhesion  
to thermoplastic resin moldings)  
IT 7647-01-0, Hydrochloric acid, uses 7647-14-5, Sodium chloride,  
uses 7681-52-9, Sodium hypochlorite 7786-30-3, Magnesium  
chloride, uses 10043-52-4, Calcium chloride, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(durable antifogging acrylic compns. with good adhesion  
to thermoplastic resin moldings)

L71 ANSWER 16 OF 28 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1996:721443 HCAPLUS  
DOCUMENT NUMBER: 125:331205  
TITLE: Manufacture of silica particles coated with  
hot-melt adhesive resins  
INVENTOR(S): Yamada, Toichi; Kamyoshi, Kazuhiko  
PATENT ASSIGNEE(S): Sekisui Fine Chemical Co Ltd, Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08245213	A2	19960924	JP 1995-45922	19950306
PRIORITY APPLN. INFO.:			JP 1995-45922	19950306

AB The particles, useful for gap agents in liq. crystal display cells, are manufd. by dispersing **thermoplastic resin** powders with av. size  $\leq 1 \mu\text{m}$  and  $\text{SiO}_2$  particles with av. size  $1-10 \mu\text{m}$  in aq. media contg. 1-50% water-sol. org. solvents to coat the particles with the resin powders, sepg. solid components from the media, drying the solids, and mech.-shearing the solids. Thus, aq. 20% EtOH dispersion contg. 6 g powd. Bu methacrylate-Me methacrylate copolymer (av. size  $0.3 \mu\text{m}$ ) was stirred with aq. 20% EtOH dispersion contg. 20 g  $\text{SiO}_2$  particles (av. size  $3.75 \mu\text{m}$ ) for 3 h. The resulting solid component was filtered, dried, and ball-milled to give homogeneously coated  $\text{SiO}_2$  particles with resin layer thickness  $0.2 \mu\text{m}$ . The particles obtained were applied on a polyimide-coated glass substrates to show good dispersibility of each particle without bonding and then heated to show high **adhesion** to the substrate.

IT 25608-33-7, Butyl methacrylate-methyl methacrylate copolymer  
26044-94-0, Isobutyl methacrylate-methyl methacrylate copolymer  
RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(manuf. of silica particles coated with hot-melt **adhesive resins**)

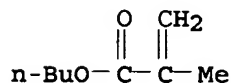
RN 25608-33-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, butyl ester, polymer with methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 97-88-1

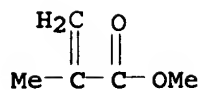
CMF C8 H14 O2



CM 2

CRN 80-62-6

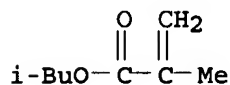
CMF C5 H8 O2



RN 26044-94-0 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with  
 2-methylpropyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

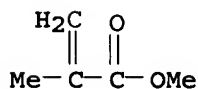
CM 1

CRN 97-86-9  
 CMF C8 H14 O2



CM 2

CRN 80-62-6  
 CMF C5 H8 O2



IC ICM C01B033-18  
 ICS G02F001-1339  
 CC 38-3 (Plastics Fabrication and Uses)  
 Section cross-reference(s): 49  
 ST silica particle hot melt **adhesive** coating; thermoplastic  
**adhesive** silica particle encapsulation; solvent silica  
 particle **adhesive** dispersion coating  
 IT **Adhesives**  
 (hot-melt, manuf. of silica particles coated with hot-melt  
**adhesive resins**)  
 IT Encapsulation  
 (micro-, manuf. of silica particles coated with hot-melt  
**adhesive resins**)  
 IT 7631-86-9, Silica, uses 25608-33-7, Butyl  
 methacrylate-methyl methacrylate copolymer 26044-94-0,  
 Isobutyl methacrylate-methyl methacrylate copolymer  
 RL: PEP (Physical, engineering or chemical process); TEM (Technical  
 or engineered material use); PROC (Process); USES (Uses)  
 (manuf. of silica particles coated with hot-melt **adhesive**  
**resins**)  
 IT 64-17-5, Ethanol, uses 67-64-1, 2-Propanone, uses  
 RL: NUU (Other use, unclassified); USES (Uses)  
 (solvent component in coating process; manuf. of silica particles

coated with hot-melt adhesive resins)

L71 ANSWER 17 OF 28 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1995:996303 HCAPLUS  
 DOCUMENT NUMBER: 124:88978  
 TITLE: Interpenetrating polymer network compositions  
 for aqueous coatings of improved physical  
 properties  
 INVENTOR(S): Lucas, Howard Robert  
 PATENT ASSIGNEE(S): Cytec Technology Corp., USA  
 SOURCE: PCT Int. Appl., 31 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9526994	A1	19951012	WO 1995-US4056	199503 30
W: AU, BR, CA, JP, KR, MX RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 5763529	A	19980609	US 1994-221315	199403 31
AU 9522766	A1	19951023	AU 1995-22766	199503 30
EP 753020	A1	19970115	EP 1995-916171	199503 30
EP 753020 R: DE, FR, GB	B1	19980506		
JP 09511275	T2	19971111	JP 1995-525880	199503 30
US 5767187	A	19980616	US 1995-442515	199505 16
US 5866258	A	19990202	US 1995-442064	199505 16
PRIORITY APPLN. INFO.:			US 1994-221315	A 199403 31
			WO 1995-US4056	W 199503 30

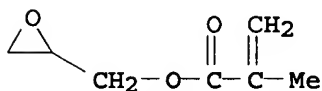
AB The title compn. comprises an aq.-dispersible, isocyanate-based  
 thermoplastic polymer contg. urethane and/or urea

linkage and an interpenetrating polymer contg. latent reactive functionality. A curable blend of Cydrothane HP 1035 and Et acrylate-Me methacrylate-m-xylylene diisocyanate copolymer gave a film having tensile strength 4170 psi, tensile modulus 940 psi, elongation 360%, and glass temp. -18°.

IT 25766-58-9, Butyl methacrylate-glycidyl methacrylate-methyl methacrylate copolymer  
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (interpenetrating polymer network compns. for aq. coatings of improved phys. properties)  
 RN 25766-58-9 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, butyl ester, polymer with methyl 2-methyl-2-propenoate and oxiranylmethyl 2-methyl-2-propenoate (9CI)  
 (CA INDEX NAME)

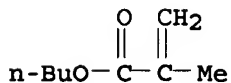
CM 1

CRN 106-91-2  
 CMF C7 H10 O3



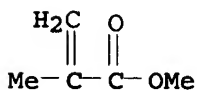
CM 2

CRN 97-88-1  
 CMF C8 H14 O2



CM 3

CRN 80-62-6  
 CMF C5 H8 O2



IC ICM C08G018-08  
 ICS C08G018-72; C08F283-00  
 CC 37-6 (Plastics Manufacture and Processing)  
 Section cross-reference(s): 42  
 ST isocyanate acrylic resin interpenetrating polymer network; polyester

polyurethane interpenetrating polymer network; coating aq  
interpenetrating polymer network; adhesive aq  
interpenetrating polymer network; water based  
interpenetrating polymer network  
IT Interpenetrating polymer networks  
RL: PRP (Properties); TEM (Technical or engineered material use);  
USES (Uses)  
(unsatd. acrylic resin/polyurethane; interpenetrating polymer  
network comps. for aq. coatings of improved phys. properties)  
IT Urethane polymers, properties  
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical  
or engineered material use); USES (Uses)  
(polyester-, interpenetrating polymer network comps. for aq.  
coatings of improved phys. properties)  
IT 25766-58-9, Butyl methacrylate-glycidyl methacrylate-methyl  
methacrylate copolymer 26141-88-8, Glycidyl methacrylate-methyl  
methacrylate copolymer 81953-54-0, Glycidyl methacrylate-2-  
hydroxyethyl acrylate-methyl methacrylate copolymer 172601-02-4,  
Ethyl acrylate-methyl methacrylate-m-xylene diisocyanate copolymer  
172601-03-5, Butyl methacrylate-methyl methacrylate-m-xylene  
diisocyanate copolymer 172601-04-6, Methyl methacrylate-m-xylene  
diisocyanate copolymer 172601-05-7 172601-06-8, Glycidyl  
methacrylate-methyl methacrylate-m-xylene diisocyanate copolymer  
172777-87-6, Cydrothane HP 1035 172777-88-7, Cydrothane HP 4033  
172777-89-8, Cydrothane HP 5035  
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical  
or engineered material use); USES (Uses)  
(interpenetrating polymer network comps. for aq. coatings of  
improved phys. properties)

L71 ANSWER 18 OF 28 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1995:632068 HCAPLUS  
DOCUMENT NUMBER: 123:57634  
TITLE: Colored thermoplastic resin  
pellets and composition allowing the safe  
handling, mixing, and formation of pellets.  
INVENTOR(S): Hishida, Iwao  
PATENT ASSIGNEE(S): Japan  
SOURCE: Eur. Pat. Appl., 12 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 625538	A1	19941123	EP 1994-401106	199405 18
EP 625538	B1	19991027		
R: BE, DE, FR, GB, NL				
JP 06329808	A2	19941129	JP 1993-119756	199305 21

JP 08011770 B4 19960207  
 CA 2124097 AA 19941122 CA 1994-2124097  
 199405  
 20  
 US 5662963 A 19970902 US 1995-570629  
 199512  
 11  
 PRIORITY APPLN. INFO.: JP 1993-119756 A  
 199305  
 21  
 US 1994-246238 A3  
 199405  
 19

AB Mixing shaping thermoplastic resin pellets of polyethylene, polypropylene, polystyrene, ABS resin, etc., a powdery colorant, and a liq. thermoplastic adhesive of ethylene-vinyl acetate copolymer, nylon, H2O-sol. acrylic polymer, etc. having a H2O content of ≥5%, followed by drying the resulting mixt. gave pellets having a coating of powdery adhesive. The colored pellets are prepd. with low equipment and running costs necessary for melting and granulating and when mixing the powdery colorant and the uncolored shaping thermoplastic resin pellets, static electricity is not generated, therefore, antistatic agents and org. solvents are not needed in processing.

IT 9003-63-8, BR 102  
 RL: PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PROC (Process); USES (Uses)  
 (adhesive; colored thermoplastic resin pellets and compn. allowing the safe handling, mixing, and formation of pellets)

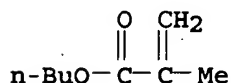
RN 9003-63-8 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, butyl ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 97-88-1

CMF C8 H14 O2



IC ICM C08J003-205

ICS C08J003-22

CC 37-6 (Plastics Manufacture and Processing)

ST polyethylene colored pellet manuf; polypropylene colored pellet manuf; polystyrene colored pellet manuf; ABS resin colored pellet manuf; EVA adhesive colored pellet manuf; nylon adhesive colored pellet manuf; acrylic adhesive colored pellet manuf; water sol adhesive colored pellet

manuf  
IT Dyes  
(colored thermoplastic resin pellets and  
compn. allowing the safe handling, mixing, and formation of  
pellets)  
IT Polyamides, uses  
Polycarbonates, uses  
Polyesters, uses  
RL: PEP (Physical, engineering or chemical process); POF (Polymer in  
formulation); PROC (Process); USES (Uses)  
(colored thermoplastic resin pellets and  
compn. allowing the safe handling, mixing, and formation of  
pellets)  
IT Vinyl acetal polymers  
RL: PEP (Physical, engineering or chemical process); POF (Polymer in  
formulation); PROC (Process); USES (Uses)  
(butyrals, adhesive; colored thermoplastic  
resin pellets and compn. allowing the safe handling,  
mixing, and formation of pellets)  
IT 32131-17-2, Nylon 66, uses  
RL: PEP (Physical, engineering or chemical process); POF (Polymer in  
formulation); PROC (Process); USES (Uses)  
(Amilan NY 66; colored thermoplastic resin  
pellets and compn. allowing the safe handling, mixing, and  
formation of pellets)  
IT 106677-58-1, Kralastic MHB  
RL: PEP (Physical, engineering or chemical process); POF (Polymer in  
formulation); PROC (Process); USES (Uses)  
(Cevian V 450,; colored thermoplastic resin  
pellets and compn. allowing the safe handling, mixing, and  
formation of pellets)  
IT 164714-97-0, Acrydic 56-834  
RL: PEP (Physical, engineering or chemical process); POF (Polymer in  
formulation); PROC (Process); USES (Uses)  
(adhesive; Acrydic 56-834; colored  
thermoplastic resin pellets and compn. allowing  
the safe handling, mixing, and formation of pellets)  
IT 164715-27-9, Fine Resin FR 301  
RL: PEP (Physical, engineering or chemical process); POF (Polymer in  
formulation); PROC (Process); USES (Uses)  
(adhesive; Fine Resin FR 301; colored  
thermoplastic resin pellets and compn. allowing  
the safe handling, mixing, and formation of pellets)  
IT 164715-60-0, Tohmide TXB  
RL: PEP (Physical, engineering or chemical process); POF (Polymer in  
formulation); PROC (Process); USES (Uses)  
(adhesive; Tohmide TXB; colored thermoplastic  
resin pellets and compn. allowing the safe handling,  
mixing, and formation of pellets)  
IT 9003-20-7, Polyvinyl acetate 9003-63-8, BR 102  
164715-02-0, Arolon 477  
RL: PEP (Physical, engineering or chemical process); POF (Polymer in  
formulation); PROC (Process); USES (Uses)  
(adhesive; colored thermoplastic  
resin pellets and compn. allowing the safe handling,  
mixing, and formation of pellets)

IT 9002-86-2, Polyvinyl chloride 9003-07-0, Noblen W 531 9003-53-6,  
 Estyrene G 15 9003-56-9 9011-14-7, PMMA 24937-78-8,  
 Ethylene-vinyl acetate copolymer  
 RL: PEP (Physical, engineering or chemical process); POF (Polymer in  
 formulation); PROC (Process); USES (Uses)  
 (colored thermoplastic resin pellets and  
 compn. allowing the safe handling, mixing, and formation of  
 pellets)

L71 ANSWER 19 OF 28 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1995:436057 HCAPLUS

DOCUMENT NUMBER: 123:114597

TITLE: Multilayered acrylic thermoplastic  
 polymers

INVENTOR(S): Hoshiba, Takao; Nokura, Koichi; Haino, Hideaki;  
 Ootani, Mitsuo

PATENT ASSIGNEE(S): Kuraray Co, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07002957	A2	19950106	JP 1993-167563	199306 14
JP 3474223	B2	20031208	JP 1993-167563	199306 14

PRIORITY APPLN. INFO.: JP 1993-167563

AB The multilayered polymers with good transparency, flexibility, and melt fluidity consist of inner layers contg.  $\geq 1$  copolymer layer (glass temp. (x)  $\geq 0^\circ$ ) of Me methacrylate 45-99.99, vinyl comonomers 0-50, and polyfunctional vinyl monomers 0.01-5% and a soft copolymer uppermost layer (x  $\leq 0^\circ$ ) of 50-100% C1-12 alkyl-contg. acrylic acid esters and 0-50% vinyl comonomers. Thus, Me methacrylate 59, Bu acrylate 40, and allyl methacrylate 1 part were polymd. to give a copolymer (x 19%), which was mixed with 88 parts Bu acrylate and 12 parts styrene and heated at  $75^\circ$  for 1 h to give a multilayered polymer (x of uppermost layer  $-44^\circ$ ) showing good flexibility and adhesion.

IT 31095-83-7P, Allyl methacrylate-2-ethylhexyl acrylate-methyl methacrylate copolymer 50658-01-0P, Allyl methacrylate-butyl acrylate-methyl methacrylate copolymer 153245-00-2P

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

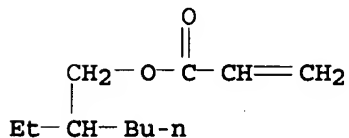
(multilayered acrylic thermoplastic polymer  
 with good transparency and melt fluidity)

RN 31095-83-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with 2-ethylhexyl  
2-propenoate and 2-propenyl 2-methyl-2-propenoate (9CI) (CA INDEX  
NAME)

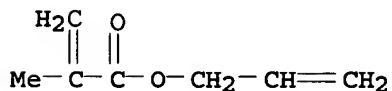
CM 1

CRN 103-11-7  
CMF C11 H20 O2



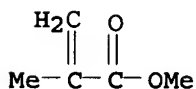
CM 2

CRN 96-05-9  
CMF C7 H10 O2



CM 3

CRN 80-62-6  
CMF C5 H8 O2

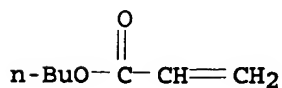


RN 50658-01-0 HCAPLUS

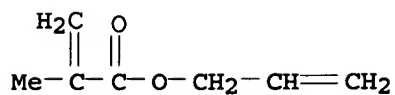
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl  
2-propenoate and 2-propenyl 2-methyl-2-propenoate (9CI) (CA INDEX  
NAME)

CM 1

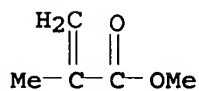
CRN 141-32-2  
CMF C7 H12 O2



CM 2

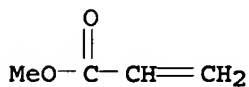
CRN 96-05-9  
CMF C7 H10 O2

CM 3

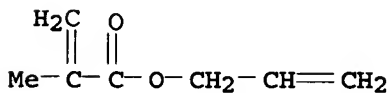
CRN 80-62-6  
CMF C5 H8 O2

RN 153245-00-2 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with methyl  
2-propenoate and 2-propenyl 2-methyl-2-propenoate (9CI) (CA INDEX  
NAME)

CM 1

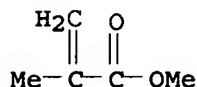
CRN 96-33-3  
CMF C4 H6 O2

CM 2

CRN 96-05-9  
CMF C7 H10 O2

CM 3

CRN 80-62-6  
CMF C5 H8 O2



IC ICM C08F265-06  
CC 38-3 (Plastics Fabrication and Uses)  
ST acrylic thermoplastic polymer multilayered  
transparency; flexibility acrylic thermoplastic  
polymer multilayered; adhesion acrylic  
thermoplastic polymer multilayered; fluidity  
acrylic thermoplastic polymer multilayered  
IT Transparent materials  
(multilayered acrylic thermoplastic polymer  
with good transparency and melt fluidity)  
IT Plastics, laminated  
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical  
or engineered material use); USES (Uses)  
(multilayered acrylic thermoplastic polymer  
with good transparency and melt fluidity)  
IT 31095-83-7P, Allyl methacrylate-2-ethylhexyl acrylate-methyl  
methacrylate copolymer 50658-01-0P, Allyl  
methacrylate-butyl acrylate-methyl methacrylate copolymer  
153245-00-2P 165951-14-4P 165951-15-5P  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical  
or engineered material use); PREP (Preparation); USES (Uses)  
(multilayered acrylic thermoplastic polymer  
with good transparency and melt fluidity)  
IT 25265-15-0P, 2-Ethylhexyl acrylate-methyl methacrylate copolymer  
25767-47-9P, Butyl acrylate-styrene copolymer 25852-37-3P, Butyl  
acrylate-methyl methacrylate copolymer  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical  
or engineered material use); PREP (Preparation); USES (Uses)  
(uppermost layer; multilayered acrylic thermoplastic  
polymer with good transparency and melt fluidity)

L71 ANSWER 20 OF 28 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1989:424790 HCAPLUS

DOCUMENT NUMBER: 111:24790

TITLE: Manufacture of thermoplastic dispersion  
adhesive

INVENTOR(S): Starzak, Marian; Dawidowicz, Bohdan; Krzemien,  
Wieslawa; Skibinski, Ryszard; Pisarek, Henryk;  
Zamarlik, Ryszard

PATENT ASSIGNEE(S): Osrodek Badawczo-Rozwojowy Kauczukow i Tworzyw  
Wynylowych, Pol.

SOURCE: Pol., 4 pp.  
CODEN: POXXA7

DOCUMENT TYPE: Patent

LANGUAGE: Polish

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

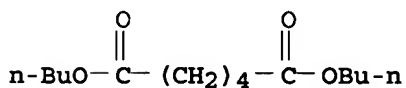
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PL 138017	B1	19860830	PL 1983-244753	19831123

PRIORITY APPLN. INFO.: PL 1983-244753 19831123

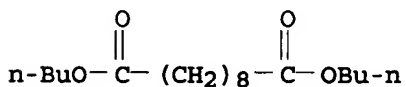
AB The title **adhesive**, as an aq. dispersion of **thermoplastic polymer**, is prepd. by (1) melting a mixt. contg. a plasticizer and emulsifier and (2) pouring the melt into the (co)polymer latex at ambient temp., and optionally adding pigments and fillers. The aq. **adhesive** dispersion is coated on paper or fabrics, H2O is evapd., and the materials are thermally bonded. Thus, low-melting coumarone resin 2.3, rosin 0.7, liq. chlorinated paraffins (contg. 40% bonded Cl) 1.4, and styrenated cresol 0.5 were added to with 3.3 wt. parts isooctyl phthalate plasticizer and 3.3 wt. parts ethoxylated phenol emulsifier, and then the mixt. was heated to 120°. The hot soln. was mixed with 55.9 wt. parts carboxylated SBR latex and 32.6 wt. parts acrylic acid-di-Bu maleate-vinyl acetate copolymer latex to give a stable thermoplastic **adhesive** dispersion showing Brookfield viscosity ≈10,000 mPa.s and solids content 60%.

IT 105-99-7, Butyl adipate 109-43-3  
RL: MOA (Modifier or additive use); USES (Uses)  
(plasticizers, for aq. dispersion thermoplastic **adhesives**)

RN 105-99-7 HCAPLUS  
CN Hexanedioic acid, dibutyl ester (9CI) (CA INDEX NAME)



RN 109-43-3 HCAPLUS  
CN Decanedioic acid, dibutyl ester (9CI) (CA INDEX NAME)



IC ICM C09J003-14  
CC 39-9 (Synthetic Elastomers and Natural Rubber)  
Section cross-reference(s): 38  
ST **adhesive** thermoplastic plasticizer polymer;  
coumarone resin blend **adhesive**; carboxylated SBR  
thermoplastic **adhesive**; phenolic emulsifier thermoplastic  
**adhesive**  
IT Coumarone-indene resins

RL: USES (Uses)  
 (aq. thermoplastic dispersion **adhesives** contg.)

IT Alkenes, uses and miscellaneous  
 RL: USES (Uses)  
 (chloro, aq. thermoplastic dispersion **adhesives** contg.)

IT **Adhesives**  
 (thermoplastic, aq.)

IT 28476-83-7, Butyl maleate-vinyl chloride copolymer  
 RL: USES (Uses)  
 (aq. thermoplastic dispersions contg., **adhesives**)

IT 9004-78-8, Ethoxylated phenol  
 RL: USES (Uses)  
 (emulsifier, aq. thermoplastic dispersion **adhesives** contg.)

IT 105-99-7, Butyl adipate 109-43-3 1319-77-3D,  
 Cresol, styrenated 27554-26-3, Isooctyl phthalate  
 RL: MOA (Modifier or additive use); USES (Uses).  
 (plasticizers, for aq. dispersion thermoplastic **adhesives**)

IT 26660-29-7, Butadiene-monobutyl maleate-styrene copolymer  
 29861-55-0, Acrylic acid-dibutyl maleate-vinyl acetate copolymer  
 RL: USES (Uses)  
 (rubber, aq. dispersions, **adhesives**, thermoplastic)

L71 ANSWER 21 OF 28 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1989:178386 HCAPLUS

DOCUMENT NUMBER: 110:178386

TITLE: Glass frit-bonding sheets and manufacture of  
 glazed ceramic substrates using the sheets

INVENTOR(S): Nishiyama, Soji; Ashida, Megumi; Tominaga,  
 Takashi; Takenoshita, Itsuro; Matsumoto,  
 Tsunetaka

PATENT ASSIGNEE(S): Nitto Denko Corp., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.  
 CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 63260838	A2	19881027	JP 1987-95998	198704 17
PRIORITY APPLN. INFO.:				JP 1987-95998
				198704 17

AB A frit-org. binder mixt. is made into sheets and coated with a **thermoplastic resin** to obtain glass powder-bonding sheets. These sheets are used to prep. glazed ceramic substrate (for circuit boards) by bonding the sheets via the resin coating to ceramic substrates, hot pressing, and sintering. The resin coating can be a mixt. of a pressure-sensitive **adhesive** and

meltable resin, and has a decompn. temp. preferably higher than that of the binder in the frit-binder mixt. Thus, a sheet of a BaO-CaO-SiO<sub>2</sub>-based glass frit/poly(Bu methacrylate) mixt. was coated with a Bu acrylate-acrylic acid copolymer-terpene phenolic resin mixt. to obtain a glass frit-bonding sheet. The sheet was bonded to an Al<sub>2</sub>O<sub>3</sub>-based substrate, pressed at 100°, the laminate was heated at 400° for 60 min, and sintered at 1270° for 120 min to obtain a glazed substrate.

IT 9003-63-8, Poly(butyl methacrylate)

RL: USES (Uses)

(adhesives contg., for bonding frit sheets in glazing ceramics)

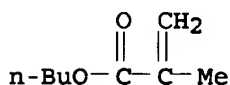
RN 9003-63-8 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, butyl ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 97-88-1

CMF C8 H14 O2



IC ICM C03C008-14

ICS B41J003-20; C03C017-28; C04B037-04; H05K001-03

ICA B41J003-04

CC 57-4 (Ceramics)

Section cross-reference(s): 38, 76

ST alumina substrate glazing polymer **adhesive**; acrylic copolymer **adhesive** glazing sheet; terpene phenolic resin **adhesive** glazing sheet; circuit board alumina substrate glazing

IT Petroleum resins

RL: USES (Uses)

(adhesives contg., for bonding frit sheets in glazing ceramics)

IT Glazing

(of alumina-based ceramics, for circuit boards)

IT Rosin

RL: USES (Uses)

(hydrogenated, **adhesives** contg., for bonding frit sheets in glazing ceramics)

IT Cyanates

RL: USES (Uses)

(poly-, **adhesives** contg., for bonding frit sheets in glazing ceramics)

IT Terpenes and Terpenoids, polymers

RL: USES (Uses)

(polymers, with phenols, **adhesives** contg., for bonding frit sheets in glazing of ceramics)

IT Phenols, polymers

RL: USES (Uses)

(polymers, with terpenes, adhesives contg., for bonding  
frit sheets in glazing of ceramics)

IT Electric circuits  
(printed, boards, alumina-based ceramic substrates, glazing of)  
IT 9003-63-8, Poly(butyl methacrylate) 25119-83-9, Acrylic  
acid-butyl acrylate copolymer 25134-51-4, Acrylic  
acid-2-ethylhexyl acrylate copolymer 25135-39-1, Acrylic  
acid-ethyl acrylate-methyl methacrylate copolymer 37685-40-8,  
Acrylic acid-ethyl acrylate-2-ethylhexyl acrylate copolymer  
RL: USES (Uses)  
(adhesives contg., for bonding frit sheets in glazing  
ceramics)

L71 ANSWER 22 OF 28 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1987:506303 HCAPLUS

DOCUMENT NUMBER: 107:106303

TITLE: Toner particles for electrophotographic copying  
and processes for their preparation

INVENTOR(S): Hedvall, Bertil; Mattson, Gunnar; Porrvik, Sten;  
Sundstroem, Goeran

PATENT ASSIGNEE(S): Casco Nobel AB, Swed.

SOURCE: PCT Int. Appl., 35 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 8701828	A1	19870326	WO 1986-SE421	198609 19
W: JP, US				
RW: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE				
SE 8504372	A	19870321	SE 1985-4372	198509 20
SE 456119	B	19880905		
SE 456119	C	19881229		
SE 8505355	A	19870514	SE 1985-5355	198511 13
SE 456120	B	19880905		
SE 456120	C	19881229		
JP 63501040	T2	19880414	JP 1986-505114	198609 19
JP 05047825	B4	19930719		
EP 277128	A1	19880810	EP 1986-905983	198609 19
EP 277128	B1	19930113		
EP 277128	B2	19970108		
R: CH, DE, FR, GB, IT, LI, SE				

US 4794065

A

19881227

US 1987-46041

198704  
20

PRIORITY APPLN. INFO.:

SE 1985-4372

A

198509  
20

SE 1985-5355

A

198511  
13

WO 1986-SE421

W

198609  
19

AB Toner particles for electrophotog. copying and electrostatic printing are comprised of pigmented **thermoplastic resin** particles having their surface covered with a thermoplastic fine-grained polymerizate. The resin particles are prepd. by suspension polymn. and the fine-grained polymerizate originates from a latex prepd. by emulsion or microemulsion polymn. A method for prepg. the toner particles is comprised of bringing an aq. dispersion of resin particles into contact with a latex of the fine-grained polymerizate and raising the temp. so that the fine-grained particles **adhere** to the resin particles. Alternately the toner particles are prepd. by suspension polymn. of a monomer for formation of the resin particles in the presence of already prepd. latex particles whereby the latex particles have higher hydrophilicity than the resin particles. The fine-grained particles can also be applied to the resin particles by a dry method. A mixt. of styrene, Na dodecyl sulfate, CuSO<sub>4</sub>, Et Me ketone peroxide, and H<sub>2</sub>O was heated to 80° under a N atm. to form a latex contg. 0.1 µm particles. The latex was used as a seed latex in polymn. of styrene to give a latex contg. 0.17 µm particles. The procedure was repeated to give a latex contg. 0.27 µm particles. A mixt. of Bu methacrylate, styrene, Printex V, Neozapon Schwartz X51, and 2,2-azobis(2,4-dimethylvaleronitrile) was heated to 85° under a N atm. to give a suspension contg. resin particles (10 µm). A dispersion of the latex, the resin particle suspension, Na dodecyl sulfate, and H<sub>2</sub>O was heated to 83° under stirring, cooled, filtered, washed with H<sub>2</sub>O, and dried to give toner particles with a pimply surface. The toner particles exhibited a charge of -16µC/g against a Hogan's carrier and good copying properties.

IT 25213-39-2

RL: USES (Uses)

(electrostatog. toners from pigmented particles of, surface-covered with thermoplastic fine-grained polymerizate)

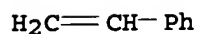
RN 25213-39-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, butyl ester, polymer with ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 100-42-5

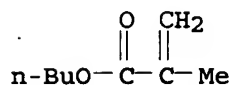
CMF C8 H8



CM 2

CRN 97-88-1

CMF C8 H14 O2



IC ICM G03G009-08  
CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
ST electrophotog toner fine particle coated; electrog toner fine particle coated; thermoplastic resin particle  
electrostatog toner  
IT Electrophotography  
(developers, toners, from pigmented resin particles surface-covered with thermoplastic fine-grained polymerizate)  
IT Electrophotographic developers  
(toners, from pigmented resin particles surface-covered with thermoplastic fine-grained polymerizate)  
IT 25213-39-2 109993-68-2 109993-69-3  
RL: USES (Uses)  
(electrostatog. toners from pigmented particles of, surface-covered with thermoplastic fine-grained polymerizate)  
IT 9003-53-6, Polystyrene  
RL: USES (Uses)  
(electrostatog. toners from pigmented resin particles surface-covered with fine particles of)

L71 ANSWER 23 OF 28 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1987:408277 HCAPLUS  
DOCUMENT NUMBER: 107:8277  
TITLE: Manufacture of polymer microparticle-containing epoxy resin compositions  
INVENTOR(S): Nakamura, Yoshinobu; Okubo, Masayoshi; Matsumoto, Tsunetaka  
PATENT ASSIGNEE(S): Nitto Electric Industrial Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 62022849 A2 19870131 JP 1985-163754

198507  
23

PRIORITY APPLN. INFO.:

JP 1985-163754

198507  
23

AB Title compns. having low internal stress and good **adhesion** to substrates, useful as coatings, **adhesives**, and esp. sealants for semiconductor devices (no data), comprise epoxy resins and 2-layer polymer microparticles. The particles are prepd. by polymg. mixts. of monomers whose polymers have glass transition temp. (Tg) above room temp. in aq. media contg. small particles of polymers having Tg below room temp. Bu acrylate (I), H<sub>2</sub>O, and K<sub>2</sub>S<sub>2</sub>O<sub>8</sub> were mixed at 70° for 3 h to form an emulsion, which was then mixed with Me methacrylate (II) and K<sub>2</sub>S<sub>2</sub>O<sub>8</sub> and heated at 70° for 3 h, and worked up to obtain a white powder. This powder, bisphenol A epoxy resin, and 2,4,6-tris(dimethylaminomethyl)phenol were mixed and heated at 80-180° for 6 h to form a product showing **adhesion** 100 kg/cm<sup>2</sup> and internal stress 65 kg/cm<sup>2</sup>, vs. 90 and 90 kg/cm<sup>2</sup>, resp., without the powder, or 70 and 89 kg/cm<sup>2</sup>, resp., using homogeneous I-II copolymer powder particles.

IT 25639-21-8, Stearyl methacrylate homopolymer  
87323-37-3

RL: USES (Uses)

(microspheres, thermoplastic-coated, fillers for epoxy resin compns. with low internal stress)

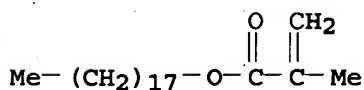
RN 25639-21-8 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, octadecyl ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 32360-05-7

CMF C22 H42 O2



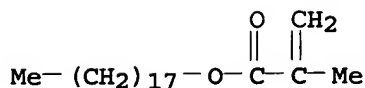
RN 87323-37-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, octadecyl ester, polymer with butyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 32360-05-7

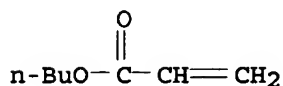
CMF C22 H42 O2



CM 2

CRN 141-32-2

CMF C7 H12 O2



IC ICM C08L063-00

CC 37-6 (Plastics Manufacture and Processing)

Section cross-reference(s): 38, 39, 76

ST two layer filler epoxy resin; composite polymer filler epoxy resin;  
soft plastic filler epoxy resin; internal stress redn epoxy resin;  
adhesion particle contg epoxy resin; polymethyl methacrylate  
coated polybutyl acrylate

IT Adhesives

(epoxy resin compns., with 2-layer polymer filler  
particles for reduced internal stress and good adhesion  
)

IT Potting compositions

(epoxy resins for, contg. 2-layer polymer filler particles for  
low internal stress)

IT Epoxy resins, uses and miscellaneous

RL: USES (Uses)

(fillers for, thermoplastic-coated soft polymer microspheres as,  
for low internal stress and good adhesion to  
substrates)

IT Stress, mechanical

(internal, of epoxy resin compns., redn. of, thermoplastic-coated  
soft polymer microsphere fillers for)

IT Rubber, synthetic

RL: USES (Uses)

(microspheres, thermoplastic-coated, fillers for epoxy resin  
compns. with low internal stress)

IT Polymerization

(emulsion, two-stage, thermoplastic-coated soft polymer  
microspheres manufd. by, fillers, for epoxy resin compns. with  
low internal stress)

IT Spheres

(micro-, of soft polymers, thermoplastic  
-coated, fillers, for epoxy resin compns. with low internal  
stress)

IT 40364-42-9

RL: USES (Uses)

(fillers for, thermoplastic-coated soft polymer microspheres as,  
for low internal stress and good adhesion to

substrates)

IT 9003-32-1, Ethyl acrylate homopolymer 9003-49-0, Butyl acrylate homopolymer 25639-21-8, Stearyl methacrylate homopolymer 26352-54-5 26353-42-4, Butyl acrylate-ethyl acrylate copolymer 26660-36-6, Butyl acrylate-glycidyl methacrylate copolymer 87323-37-3

RL: USES (Uses)

(microspheres, thermoplastic-coated, fillers for epoxy resin compns. with low internal stress)

IT 9011-14-7, Methyl methacrylate homopolymer

RL: PRP (Properties)

(soft polymer microspheres coated with, fillers, for epoxy resin compns. with low inner stress)

L71 ANSWER 24 OF 28 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1983:544228 HCAPLUS

DOCUMENT NUMBER: 99:144228

TITLE: Steel foil with thin coating of chromium compounds

INVENTOR(S): Licio, Jose Marcio; Natto Garcia, Rafael; Mattos de Menezes, Arivaldo; Oliveira, Valdo Roberto Souza

PATENT ASSIGNEE(S): Companhia Siderurgica Nacional, Brazil

SOURCE: Braz. Pedido PI, 6 pp.

CODEN: BPXXDX

DOCUMENT TYPE: Patent

LANGUAGE: Portuguese

FAMILY ACC. NUM. COUNT: 1

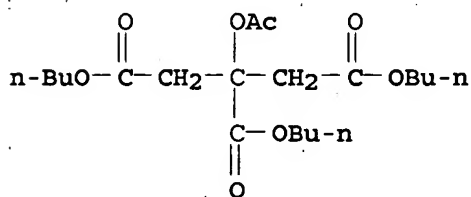
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
BR 8106042	A	19830426	BR 1981-6042	19810922
PRIORITY APPLN. INFO.:				BR 1981-6042
				19810922

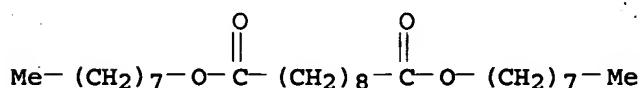
AB The steel foil (Passicrom) esp. suitable as low-cost substitute for tinplate, used in the prodn. of cans, consists of a sheet steel substrate coated on both sides with protective very thin (0.001-0.007  $\mu$ ) layers of electrochem. deposited corrosion- and oxidn.-resistant Cr compds., consisting mainly of Cr oxides and/or hydroxide (5-20 mg/m<sup>2</sup>), overcoated with thin oil layers (0.2-1.9 g/100 m<sup>2</sup>). The foil may be manufd. by processing conventional sheet steel in a slightly adapted electrochem. tinning plant. The preliminary processing consists of a successive strapping of the sheets by point welding, deoiling the foil by electrolytic alk. cleaning, washing residues of the alk. soln., electrolytic pickling with dil. H<sub>2</sub>SO<sub>4</sub> contg. 0.5-50% phenolated sulfonic acids to remove oxide deposits and increase adherence of the Cr compds. to the sheet surface. The electrolytic deposition of Cr compds. is performed at 40-90° in aq. solns. contg. 15-70 g Na<sub>2</sub>Cr<sub>2</sub>O<sub>7</sub>/L, 0.1-3% H<sub>2</sub>SO<sub>4</sub> and unspecified catalysts, using cathodic c.d. 5-20

A/dm<sup>2</sup>, the pH being maintained during the process at 2-6 by addn. of H<sub>2</sub>CrO<sub>4</sub>. To facilitate the storing and handling of the foil in the processing plants (esp. high-speed automatic canning lines), and provide an addnl. abrasion and scratch protection, the foil is subjected to (preferably electrostatic) oiling, advantageously with dioctyl sebacate [2432-87-3], acetyl tri-Bu citrate [77-90-7], or cotton-seed oil, preferably at 0.7-1.2 g/100 m<sup>2</sup>. The foil shows good adherence to thermoplastic resin based coating, used inside the can to sep. the canned products from the metal wall, and a relatively high corrosion resistance, only slightly below that of conventional tinplate no. 10 with 1.1 g Sn/m<sup>2</sup>.

IT 77-90-7 2432-87-3  
 RL: USES (Uses)  
 (coating with, of chromated steel sheet for cans)  
 RN 77-90-7 HCAPLUS  
 CN 1,2,3-Propanetricarboxylic acid, 2-(acetyloxy)-, tributyl ester (9CI) (CA INDEX NAME)



RN 2432-87-3 HCAPLUS  
 CN Decanedioic acid, dioctyl ester (9CI) (CA INDEX NAME)



IC C23F009-02  
 CC 55-6 (Ferrous Metals and Alloys)  
 Section cross-reference(s): 72  
 ST chromate electroplate steel can  
 IT Cans  
 (chromated steel sheets for)  
 IT Cottonseed oil  
 RL: USES (Uses)  
 (coating with, of chromated steel sheet for cans)  
 IT Coating process  
 (oiling, of electrochromated steel sheet for cans)  
 IT 77-90-7 2432-87-3  
 RL: USES (Uses)  
 (coating with, of chromated steel sheet for cans)  
 IT 10588-01-9  
 RL: USES (Uses)  
 (electroplating in electrolyte contg., of steel sheet followed by oiling for cans)

IT 11118-57-3  
RL: USES (Uses)  
(electroplating with, of steel sheet followed by oiling for cans)

L71 ANSWER 25 OF 28 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1983:423761 HCAPLUS  
DOCUMENT NUMBER: 99:23761  
TITLE: Dispersion **adhesive** with thermoplastic properties  
INVENTOR(S): Jaworski, Marcelli; Poznanski, Jan; Lech, Maria; Gasiorski, Kazimierz  
PATENT ASSIGNEE(S): Centralne Laboratorium Przemyslu Obuwniczego, Pol.  
SOURCE: Pol., 3 pp.  
CODEN: POXXA7  
DOCUMENT TYPE: Patent  
LANGUAGE: Polish  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

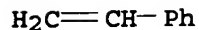
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PL 115336	B2	19810331	PL 1977-203316	19771222
PRIORITY APPLN. INFO.:				19771222

AB The title **adhesives**, esp. suitable for rapid bonding of shoe components at 70-90°, is manufd. by homogenizing for 15-30 min a mixt. contg. 35-60% aq. dispersion of poly(vinyl acetate) (I) [9003-20-7] 10-60, nonionic emulsifier 0.5-5, 35-60% soln. of coumarone-indene resin in org. solvents or 40% aq. dispersion of colophony 20-75, 35-45% aq. dispersion of acrylamide-Et acrylate-methacrylic acid copolymer (II) [37953-47-2], 35-45% aq. dispersion of Bu acrylate-Bu methacrylate-divinylbenzene-methylolmethacrylamide copolymer (III) [66039-08-5] 20-75, and/or 35-45% aq. dispersion of Bu acrylate-Bu methacrylate-methylolmethacrylamide copolymer [31135-91-8] 20-75, and/or 35-45% aq. dispersion of Bu methacrylate-styrene copolymer [25213-39-2] 20-75 parts. Thus, a typical compn. comprised 40% aq. dispersion of I 30, 40% aq. dispersion of II 100, 40% aq. dispersion of III 40, 50% aq. dispersion of colophony 40, and polyethylene glycol alkylphenyl ether 3 parts.

IT 25213-39-2  
RL: USES (Uses)  
(**adhesives** contg., dispersion, thermoplastic, for shoes)  
RN 25213-39-2 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, butyl ester, polymer with ethenylbenzene (9CI) (CA INDEX NAME)

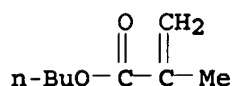
CM 1

CRN 100-42-5  
CMF C8 H8



CM 2

CRN 97-88-1  
CMF C8 H14 O2



IC C09J003-14  
CC 38-3 (Plastics Fabrication and Uses)  
ST adhesive dispersion thermoplastic shoe component1;  
polyvinyl acetate dispersion thermoplastic adhesive;  
acrylic polymer dispersion thermoplastic adhesive;  
coumarone indene resin thermoplastic  
adhesive; colophony dispersion thermoplastic  
adhesive; polyethylene glycol ether dispersion  
adhesive  
IT Coumarone-indene resins  
Rosin  
RL: USES (Uses)  
(adhesives contg., acrylic polymer-poly(vinyl  
acetate)-based, for shoes)  
IT Adhesives  
(dispersion, thermoplastic, acrylic polymer-poly(vinyl  
acetate)-based, for shoes)  
IT Shoes  
(manuf. of, dispersion thermoplastic adhesives for)  
IT Emulsifying agents  
(polyethylene glycol alkylphenyl ethers, dispersion  
adhesive manuf. of in presence of)  
IT 9003-20-7 25213-39-2 31135-91-8 37953-47-2  
66039-08-5  
RL: USES (Uses)  
(adhesives contg., dispersion, thermoplastic, for  
shoes)  
IT 25322-68-3D, alkylphenyl ethers 26027-38-3  
RL: USES (Uses)  
(emulsifying agents, dispersion adhesive manuf. in  
presence of)

L71 ANSWER 26 OF 28 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1979:447388 HCAPLUS  
DOCUMENT NUMBER: 91:47388  
TITLE: Pressure-sensitive correction tape  
INVENTOR(S): Krampe, Stephen E.; Pierce, James N.

PATENT ASSIGNEE(S): Minnesota Mining and Manufacturing Co., USA  
 SOURCE: Ger. Offen., 27 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2840220	A1	19790322	DE 1978-2840220	19780913
FR 2403372	A1	19790413	FR 1978-26331	19780913
GB 2006235	A	19790502	GB 1978-36643	19780913
JP 54056533	A2	19790507	JP 1978-112869	19780913
AU 7839820	A1	19800320	AU 1978-39820	19780913
PRIORITY APPLN. INFO.:		US 1977-833287	A	19770914

AB For the correction of typing errors without visible marks and soiling of hands or clothing a nonpenetrating "vertically cohesive" ink, such as those of U.S. 3,825,437 (Ger. Offen 2,335,838; CA 81: 154812a) and a 20-30  $\mu$  polyester film as preferred support with a 2-40 g/m<sup>2</sup> coating, applied as melt or soln. and adhering strongly ( $\geq 2.4$  g/cm stripping force) to the ink, but weakly ( $< 0.4$  g/cm) to paper, are used. Such a coating with selective wettability, spread, and compatibility contains 15-75% of a thermoplastic resin (polyamide, epoxy, acrylic), 30-75% of a plasticizer, and  $< 50\%$  of a compatible, adhesion modifying resin [poly(vinyl butyral)]. After retyping the wrong letter through the corrective tape or after pen pressure it will adhere to the tape and be lifted with it from the paper. Thus, a sheet which worked well with IBM Correctable Film Ribbon was comprised of a 12 g/m<sup>2</sup> coating on a 30  $\mu$  polyester film support applied as a soln. of a polyamide resin 5, poly(vinyl butyral) 3, and dimer acid (plasticizer) 8 parts in a 1:1 PhMe-2-ProOH mixt. 100 parts and cut into 3 + 7.5 cm strips. Its adhesion to paper was 0 and to ink 14.6 g/cm.

IT 25608-33-7

RL: USES (Uses)

(coatings, for typing correction tapes)

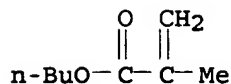
RN 25608-33-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, butyl ester, polymer with methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 97-88-1

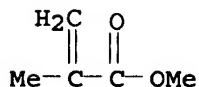
CMF C8 H14 O2



CM 2

CRN 80-62-6

CMF C5 H8 O2



IC B41M005-02; C09D009-00

CC 74-8 (Radiation Chemistry, Photochemistry, and Photographic Processes)

Section cross-reference(s): 42

ST typing correction tape pressure sensitive

IT Transfers

(coatings contg. thermoplastic resin,  
plasticizer and adhesion-modifying resin for,  
for typing correction tapes)

IT Paraffin waxes and Hydrocarbon waxes, uses and miscellaneous Polyamides, uses and miscellaneous

RL: USES (Uses)

(coatings, for typing correction tapes)

IT Typewriter ribbons

(correction tapes for, coatings contg. thermoplastic  
resin, plasticizer and adhesion-modifying  
resin for)

IT Vinyl acetal polymers

RL: USES (Uses)

(butyrals, coatings, for typing correction tapes)

IT Fatty acids, polymers

RL: USES (Uses)

(dimers, coatings, for typing correction tapes)

IT 9002-86-2 9003-22-9 9010-88-2 24937-78-8 25608-33-7

RL: USES (Uses)

(coatings, for typing correction tapes)

IT 9003-20-7

RL: USES (Uses)

(typing correction tapes with layers contg.)

L71 ANSWER 27 OF 28 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1979:178164 HCAPLUS

DOCUMENT NUMBER: 90:178164

TITLE: Pressure-fixable magnetic toners  
 INVENTOR(S): Brynko, Carl; Brynko, Carl G.  
 PATENT ASSIGNEE(S): Reprographic Materials, Inc., USA  
 SOURCE: U.S., 8 pp.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4133774	A	19790109	US 1977-837693	197709 29
US 4220698	A	19800902	US 1978-971206	197812 20
PRIORITY APPLN. INFO.:			US 1977-837693	A3 197709 29

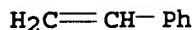
AB Pressure-fixable magnetic toners for developing electrophotog.  
 latent images are prepd. by dispersing magnetic particles in an aq.  
 medium, adding a pressure-sensitive **adhesive org.**  
**resin**, a surfactant, and an agglomerating agent to  
 agglomerate the magnetic particles and the **adhesive**  
**resin** to form a barrier layer, adding a resin emulsion to  
 encapsulate the particles to form a strengthening layer, and adding  
 an emulsion of a conductive material to provide an outer conductive  
 layer. The magnetic particles are prepd. from CrO<sub>2</sub>, BaTiO<sub>3</sub>, or Fe  
 oxide. Thus, a nonionic polyethylene emulsion was thoroughly mixed  
 with an aq. dispersion contg. a magnetic oxide powder, an anionic  
 surfactant, and gelatin to form agglomerated particles having a core  
 and a barrier layer. A Bu acrylate-methacrylic acid-Me methacrylate  
 terpolymer emulsion was mixed with the above slurry to form an  
 overcoat in the agglomerated particles. A final conductive surface  
 layer was formed on the agglomerated particles by using an aq.  
 dispersion contg. polyacrylamide and C black to give magnetic  
 toners.

IT 25213-39-2  
 RL: USES (Uses)  
 (coatings, for pressure-fixable magnetic toners for electrog. and  
 electrophotog.)

RN 25213-39-2 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, butyl ester, polymer with  
 ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

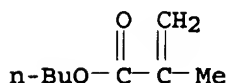
CRN 100-42-5  
 CMF C8 H8



CM 2

CRN 97-88-1

CMF C8 H14 O2



IC G03G009-08  
 INCL 252062100D  
 CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic Processes)  
 ST pressure fixable magnetic toner electrophotog; **adhesive resin** electrophotog magnetic toner  
 IT Carbon black, uses and miscellaneous  
 RL: USES (Uses)  
 (elec. conductive outer layer contg., for pressure-fixable magnetic electrostatog. toners)  
 IT Electrography  
 (developers, magnetic, pressure-fixable, contg. **adhesive resin and thermoplastic resin**)  
 IT Photography, electro-, developers  
 (magnetic, pressure-fixable, contg. **adhesive resin and thermoplastic resin**)  
 IT 9002-88-4 9003-05-8 9006-26-2 25035-69-2 25213-39-2  
 RL: USES (Uses)  
 (coatings, for pressure-fixable magnetic toners for electrog. and electrophotog.)

L71 ANSWER 28 OF 28 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1976:6704 HCAPLUS  
 DOCUMENT NUMBER: 84:6704  
 TITLE: Decalcomania for decorating ceramic ware  
 INVENTOR(S): Kluge, Karl H.; Eppich, Alfred  
 PATENT ASSIGNEE(S): Leipold, F. Xavier, Fed. Rep. Ger.  
 SOURCE: U.S., 7 pp.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 3894167	A	19750708	US 1972-246964	197204 24

PRIORITY APPLN. INFO.:

US 1972-246964

A

197204  
24

AB Decalcomanias, contg. vitrifiable pigments and thermoplastic resins, suitable for high-speed application to ceramic materials and glassware, contain a layer having low adhesion to the carrier layer, so that the carrier layer is readily removable after applying the decalcomania to the substrate, the low adhesion being achieved by introducing a wax, i.e., polyethylene [9002-88-4] or polyethylene glycol [25322-68-3], into the decal layer or by incorporating an oil in a preprint lacquer layer between the decal layer and the carrier. Preferably, the pigment-contg. layer is coated with a thermoplastic resin layer which becomes tacky when heated.

IT 9003-63-8

RL: DEV (Device component use); USES (Uses)  
(decalcomanias contg., for ceramic materials)

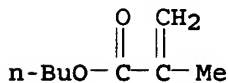
RN 9003-63-8 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, butyl ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 97-88-1

CMF C8 H14 O2



IC B44C

INCL 428040000

CC 42-13 (Coatings, Inks, and Related Products)

Section cross-reference(s): 57

ST decalcomania decorative ceramic; release agent decalcomania ceramic; polyethylene release agent decalcomania; glycol polyoxyethylene release agent; oil release agent decalcomania

IT Ceramic materials and wares  
Glass

RL: USES (Uses)

(decalcomanias for, with readily removable carrier layer)

IT Decalcomanias

(for ceramic ware, with readily removable carrier layer)

IT Castor oil  
Hydrocarbon oils  
Oils

RL: USES (Uses)

(release agents, in decalcomanias for ceramic ware)

IT Adhesives

(thermoplastic resins, on decalcomanias for ceramic ware)

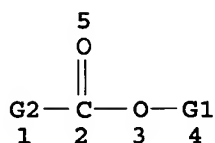
IT 9003-20-7

RL: USES (Uses)

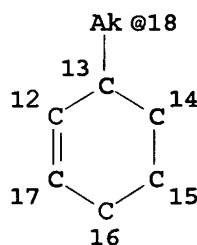
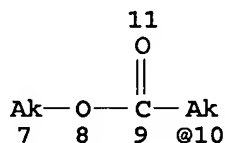
(adhesives, on decalcomanias for ceramic ware)  
 IT 9003-63-8  
 RL: DEV (Device component use); USES (Uses)  
 (decalcomanias contg., for ceramic materials)  
 IT 9002-88-4 25322-68-3  
 RL: USES (Uses)  
 (wax, release agents, in decalcomanias for ceramic ware)

=> d 142 que stat

L1 STR



Ak @6



Ak @26

VAR G1=H/26

VAR G2=6/10/18

NODE ATTRIBUTES:

CONNECT IS E1 RC AT 6

CONNECT IS E1 RC AT 7

CONNECT IS E1 RC AT 26

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

ECOUNT IS M3-X24 C AT 6

ECOUNT IS M3-X24 C AT 7

ECOUNT IS M3-X24 C AT 10

ECOUNT IS M3-X24 C AT 18

ECOUNT IS M3-X24 C AT 26

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 19

STEREO ATTRIBUTES: NONE

L2 SCR 1992

L3 SCR 2005

L4 SCR 1199

L5 SCR 2016

L6 SCR 2032

L7 SCR 1968

L8 SCR 2026

L9 32210 SEA FILE=REGISTRY SSS FUL L1 AND L3 AND L4 NOT (L2 OR L5 OR L6 OR L7 OR L8)

L10 7 SEA FILE=REGISTRY ("PHENOL-FORMALDEHYDE CONDENSATE"/CN OR "PHENOL-FORMALDEHYDE COPOLYMER"/CN OR "PHENOL-FORMALDEHYDE COPOLYMER 6-DIAZO-5-OXO-1-NAPHTHALENESULFONATE"/CN OR "PHENOL-FORMALDEHYDE COPOLYMER ACETATE"/CN OR "PHENOL-FORMALDEHYDE COPOLYMER AMMONIUM SALT"/CN OR "PHENOL-FORMALDEHYDE COPOLYMER BENZENEACETATE"/CN OR "PHENOL-FORMALDEHYDE COPOLYMER BUTANOATE"/CN OR "PHENOL-FORMALDEHYDE COPOLYMER CYANATE"/CN OR "PHENOL-FORMALDEHYDE COPOLYMER ESTER WITH ACETIC ANHYDRIDE"/CN)

L11 7 SEA FILE=REGISTRY ("MELAMINE-FORMALDEHYDE CONDENSATE"/CN OR "MELAMINE-FORMALDEHYDE COPOLYMER"/CN OR "MELAMINE-FORMALDEHYDE POLYMER"/CN OR "MELAMINE-FORMALDEHYDE RESIN"/CN OR "MELAMINE-FORMALDEHYDE-2-HYDROXYETHYL ACRYLATE COPOLYMER"/CN OR "MELAMINE-FORMALDEHYDE-2-HYDROXYETHYL METHACRYLATE-STYRENE-METHYL METHACRYLATE-BUTYL METHACRYLATE-BUTYL ACRYLATE-2-DIMETHYLAMINOETHYL METHACRYLATE-PHENYLTRIMETHOXYSILANE-DIMETHYLDIMETHOXYSILANE GRAFT C"/CN OR "MELAMINE-FORMALDEHYDE-2-HYDROXYETHYL METHACRYLATE-STYRENE-METHYL METHACRYLATE-BUTYL METHACRYLATE-BUTYL ACRYLATE-3-METHACRYLOYLOXYPROPYLTRIMETHOXYSILANE-2-DIMETHYLAMINOETHYL METHACRYLATE-PHENYLTRIMETHOXYSILANE"/CN OR "MELAMINE-FORMALDEHYDE-2-PROPANOL RESIN"/CN OR "MELAMINE-FORMALDEHYDE-3-(ALLYLOXY) PROPIONAMIDE POLYMER"/CN)

L12 1 SEA FILE=REGISTRY "NAPHTHOL-FORMALDEHYDE COPOLYMER"/CN

L28 61218 SEA FILE=HCAPLUS L9

L29 16882 SEA FILE=HCAPLUS L10

L30 22989 SEA FILE=HCAPLUS L29 OR PHENOL(W) FORMALDEHYDE

L31 19388 SEA FILE=HCAPLUS L11 OR MELAMINE(W) FORMALDEHYDE

L32 109 SEA FILE=HCAPLUS L12 OR NAPHTHOL(W) FORMALDEHYDE

L34 42 SEA FILE=HCAPLUS (TRIALLYL(W) CYANURATE(3A) RESORCINOL OR P(W) CHLOROPHENOL(3A) RESORCINOL) (3A) FORMALDEHYDE

L35 896 SEA FILE=HCAPLUS (POLYMER# OR COPOLYMER#) (2A) STYRENE(3A) BUTADIENE(3A) VINYL PYRIDINE

L37 2116 SEA FILE=HCAPLUS POLYEPOXIDE

L39 149 SEA FILE=HCAPLUS THERMOPLASTIC(A) (POLYMER? OR RESIN#) AND (ADHESI? OR ADHERE?) AND L28

L42 4 SEA FILE=HCAPLUS L39 AND (L30 OR L31 OR L32 OR L37 OR L34 OR L35)

*Adhesive resins as claimed in  
claims 3 & 4*

=> d l42 bib abs hitstr ind 1-4

L42 ANSWER 1 OF 4 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:534005 HCAPLUS

DOCUMENT NUMBER: 141:89930

TITLE: Adhesion promoters for cord-reinforced thermoplastics and substrate/thermoplastic composites

INVENTOR(S): Wentworth, Gary; Chen, Zhi; Semlow, Stephen; O'Rourke, Stephen; Stefanisin, Kimberly L.; English, John

PATENT ASSIGNEE(S): The C.P. Hall Company, USA

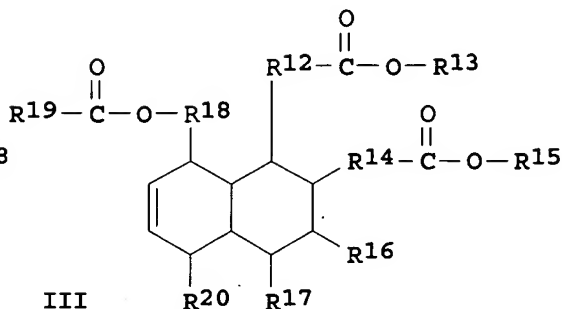
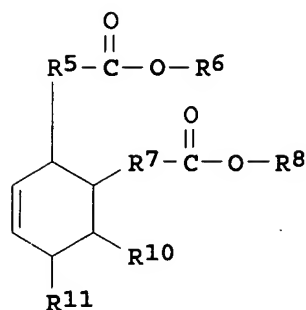
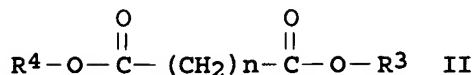
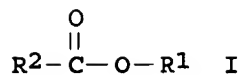
SOURCE: U.S. Pat. Appl. Publ., 22 pp., Cont.-in-part of U.S. Ser. No. 434,616.

*Applicant*

DOCUMENT TYPE: CODEN: USXXCO  
LANGUAGE: Patent  
FAMILY ACC. NUM. COUNT: English  
PATENT INFORMATION: 8

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004127615	A1	20040701	US 2003-706196	20031112
US 2003220426	A1	20031127	US 2002-144229	20020510
US 6884832	B2	20050426		
US 2003220427	A1	20031127	US 2002-301770	20021121
US 2004002563	A1	20040101	US 2003-434616	20030509
US 6858664	B2	20050222		
US 2004002564	A1	20040101	US 2003-435212	20030509
PRIORITY APPLN. INFO.:			US 2002-144229	A2 20020510
			US 2002-301770	A2 20021121
			US 2003-434616	A2 20030509
			US 2003-435212	A2 20030509

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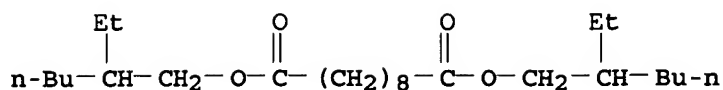
AB A thermoplastic polymeric material compn. comprising a thermoplastic polymeric material selected from the group consisting of thermoplastic polymers, thermoplastic polymer alloys, and combinations thereof, and an adhesion promoter contg. (1) an adhesive resin in an amt. of about 0.1% to about 15% by wt., based on the wt. of the thermoplastic polymeric material in the compn.; and (2) a long chain ester, particularly dimerate and trimerate esters, in an amt. of about 0.1% to about 15% by wt., based on the wt. of the thermoplastic polymeric material in the compn., is capable of unexpected adhesion to substrates such as natural fabric substrates, synthetic polymeric fabric substrates, metal substrates, and thermoplastic polymeric material substrates, particularly natural cords, synthetic polymeric cords, metal cords, and glass cords for use in cord-reinforced articles such as hoses, conveyor belts, transmission belts, and the like. The esters used in the adhesion promoter have formula I, II, III, IV or a combination of any two or more of said esters, wherein R<sup>1</sup>, R<sup>3</sup>, R<sup>4</sup>, R<sup>6</sup>, R<sup>8</sup>, R<sup>13</sup>, R<sup>15</sup> and R<sup>19</sup>, same or different, are a C<sup>3</sup>-C<sup>24</sup> alkyl radical, straight chain or branched, satd. or unsatd. contg. 1 to 3 carbon-to-carbon double bonds; R<sup>2</sup> is a C<sup>3</sup>-C<sup>24</sup> satd. fatty acid residue, or an unsatd. fatty acid residue having 1 to 6 carbon-to-carbon double bonds; n=3-24; R<sup>5</sup>, R<sup>7</sup>, R<sup>12</sup>, R<sup>14</sup>, R<sup>18</sup>, same or different, are a C<sup>3</sup>-C<sup>24</sup> hydrocarbon chain, straight chain or branched, either satd. or having 1 to 6 carbon-to-carbon double bonds; R<sup>10</sup>, R<sup>11</sup>, R<sup>16</sup>, R<sup>17</sup> and R<sup>20</sup>, same or different, are a C<sup>3</sup>-C<sup>24</sup>, satd. hydrocarbon chain, straight chain or branched; or an unsatd. C<sup>3</sup>-C<sup>24</sup>, hydrocarbon chain, straight chain or branched, having 1 to 6, carbon-to-carbon double bonds.

IT 122-62-3

RL: MOA (Modifier or additive use); USES (Uses)  
(adhesion promoter; adhesion promoters for  
cord-reinforced thermoplastics and substrate/thermoplastic  
composites)

RN 122-62-3 HCAPLUS

CN Decanedioic acid, bis(2-ethylhexyl) ester (9CI) (CA INDEX NAME)



IT 9003-08-1D, Melamine formaldehyde  
 copolymer, N-oxymethyl deriv. 9003-35-4, Phenol-  
 formaldehyde copolymer 58253-69-3, Formaldehyde  
 Naphthol copolymer  
 RL: POF (Polymer in formulation); TEM (Technical or engineered  
 material use); USES (Uses)  
 (adhesion promoters for cord-reinforced thermoplastics  
 and substrate/thermoplastic composites)

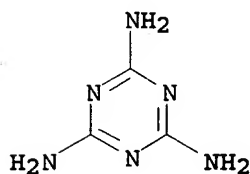
RN 9003-08-1 HCAPLUS

CN 1,3,5-Triazine-2,4,6-triamine, polymer with formaldehyde (9CI) (CA  
 INDEX NAME)

CM 1

CRN 108-78-1

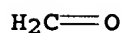
CMF C3 H6 N6



CM 2

CRN 50-00-0

CMF C H2 O



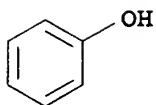
RN 9003-35-4 HCAPLUS

CN Phenol, polymer with formaldehyde (9CI) (CA INDEX NAME)

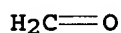
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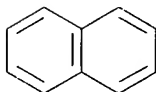
CMF C6 H6 O



CM 2

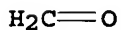
CRN 50-00-0  
CMF C H2 ORN 58253-69-3 HCAPLUS  
CN Formaldehyde, polymer with naphthalenol (9CI) (CA INDEX NAME)

CM 1

CRN 1321-67-1  
CMF C10 H8 O  
CCI IDS

D1-OH

CM 2

CRN 50-00-0  
CMF C H2 OIC ICM C08K005-09  
INCL 524284000  
CC 37-6 (Plastics Manufacture and Processing)  
ST **adhesion** promoter cord reinforced thermoplastic; dimerate ester long chain **adhesion** promoter; trimerate ester long chain **adhesion** promoter  
IT Fatty acids, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(C18-unsatd., dimers and trimers, 2-ethylhexyl esters, **adhesion** promoter; **adhesion** promoters for

- cord-reinforced thermoplastics and substrate/thermoplastic composites)
- IT Aminoplasts  
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
(N-oxymethyl deriv.; **adhesion** promoters for cord-reinforced thermoplastics and substrate/thermoplastic composites)
- IT Urethane rubber, uses  
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
(TDI-based; **adhesion** promoters for cord-reinforced thermoplastics and substrate/thermoplastic composites)
- IT Fatty acids, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(**adhesion** promoter; **adhesion** promoters for cord-reinforced thermoplastics and substrate/thermoplastic composites)
- IT **Adhesion** promoters  
Composites  
Conveyor belts  
Hoses  
(**adhesion** promoters for cord-reinforced thermoplastics and substrate/thermoplastic composites)
- IT Epoxy resins, uses  
Phenolic resins, uses  
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
(**adhesion** promoters for cord-reinforced thermoplastics and substrate/thermoplastic composites)
- IT Glass, uses  
Metals, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(cord; **adhesion** promoters for cord-reinforced thermoplastics and substrate/thermoplastic composites)
- IT Fatty acids, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(dimer acids, C18, reaction products with a C3-C24 alc., **adhesion** promoter; **adhesion** promoters for cord-reinforced thermoplastics and substrate/thermoplastic composites)
- IT Polyurethanes, uses  
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
(polyester-; **adhesion** promoters for cord-reinforced thermoplastics and substrate/thermoplastic composites)
- IT Reinforced plastics  
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
(thermoplastics, cord-reinforced; **adhesion** promoters for cord-reinforced thermoplastics and substrate/thermoplastic composites)
- IT Belts  
(transmission; **adhesion** promoters for cord-reinforced thermoplastics and substrate/thermoplastic composites)
- IT 9002-86-2, Geon 121

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
(OxyVinyls 240F; **adhesion** promoters for cord-reinforced thermoplastics and substrate/thermoplastic composites)

IT 111-20-6D, Sebacic acid, reaction products with a C6-C24 alc.  
122-62-3 67290-26-0D, reaction products with a C3-C24 alc.  
639479-06-4D, reaction products with a C3-C24 alc. 639479-07-5D, reaction products with a C3-C24 alc. 639479-08-6D, reaction products with a C3-C24 alc. 640724-45-4, RX-13845 640725-01-5, RX-13928 713516-57-5, RX 13946 713516-96-2, RX 13939 713516-98-4, RX 13943 713517-22-7, RX 13977 713517-75-0, RX 13978

RL: MOA (Modifier or additive use); USES (Uses)  
(**adhesion** promoter; **adhesion** promoters for cord-reinforced thermoplastics and substrate/thermoplastic composites)

IT 104-76-7, 2-Ethylhexyl alcohol  
RL: NUU (Other use, unclassified); USES (Uses)  
(**adhesion** promoters for cord-reinforced thermoplastics and substrate/thermoplastic composites)

IT 9003-08-1D, Melamine formaldehyde copolymer, N-oxymethyl deriv. 9003-35-4, Phenol-formaldehyde copolymer 24969-11-7, Resorcinol formaldehyde copolymer 25053-48-9, Styrene, butadiene, 2-vinylpyridine copolymer 28410-58-4, Formaldehyde-resorcinol-triallyl cyanurate copolymer 39702-51-7, p-Chlorophenol, resorcinol, formaldehyde copolymer 58253-69-3, Formaldehyde Naphthol copolymer

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
(**adhesion** promoters for cord-reinforced thermoplastics and substrate/thermoplastic composites)

IT 1344-95-2, Calcium silicate  
RL: TEM (Technical or engineered material use); USES (Uses)  
(inert carrier; **adhesion** promoters for cord-reinforced thermoplastics and substrate/thermoplastic composites)

L42 ANSWER 2 OF 4 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:513365 HCAPLUS  
DOCUMENT NUMBER: 141:73078  
TITLE: **Adhesion** promoters of long chain esters for sealants and sealant compositions  
INVENTOR(S): Klosowski, Jerome M.; Wentworth, Gary; Chen, Zhi; Semlow, Stephen; O'Rourke, Stephen; Stefanisin, Kimberly L.; English, John  
PATENT ASSIGNEE(S): The C.P. Hall Company, USA  
SOURCE: U.S. Pat. Appl. Publ., 22 pp., Cont.-in-part of U.S. Pat. Appl. 2004 2,563.  
CODEN: USXXCO  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 8  
PATENT INFORMATION:

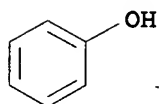
*Applicant*

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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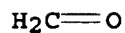
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US 2003220427	A1	20031127	US 2002-301770	200211 21
US 2004002563	A1	20040101	US 2003-434616	200305 09
US 6858664	B2	20050222		
US 2004002564	A1	20040101	US 2003-435212	200305 09
US 2005194752	A1	20050908	US 2004-18790	200412 20
PRIORITY APPLN. INFO.:			US 2002-144229	A2 200205 10
			US 2002-301770	A2 200211 21
			US 2003-434616	A2 200305 09
			US 2003-435212	A2 200305 09
			US 2003-718233	A2 200311 19

AB A sealant compn. comprises a sealant, an adhesive resin, and a long chain ester, particularly dimerate and trimerate esters, capable of unexpected adhesion to substrates such as ceramic substrates (e.g., concrete), glass substrates, metal substrates such as metal flat stock materials, elastic substrates including substrates comprising natural and/or synthetic rubbers, and substrates comprising thermoplastic polymeric materials, particularly for use in sealing around bathroom fixtures, in storage areas, vents, plumbing lines, flooring, wheel wells, and the like. For example, an adhesion promoter system utilizing a dry carrier, RX-13845, was prep'd. by adding preheated Cyrez CRA 138 resin liq. to a dry carrier (Ca silicate) contained in a mixing bowl, followed by addn. of preheated RX-13804, a representative long chain ester.

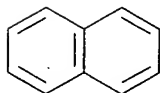
IT 9003-35-4, Phenol-formaldehyde copolymer  
58253-69-3, Naphthol-formaldehyde  
copolymer  
RL: TEM (Technical or engineered material use); USES (Uses)  
(adhesive; long chain dimerate and trimerate ester  
adhesion promoters for improved bonding of sealants to  
various substrates)  
RN 9003-35-4 HCAPLUS  
CN Phenol, polymer with formaldehyde (9CI) (CA INDEX NAME)  
  
CM 1  
  
CRN 108-95-2  
CMF C6 H6 O



CM 2  
  
CRN 50-00-0  
CMF C H2 O

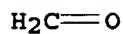


RN 58253-69-3 HCAPLUS  
CN Formaldehyde, polymer with naphthalenol (9CI) (CA INDEX NAME)  
  
CM 1  
  
CRN 1321-67-1  
CMF C10 H8 O  
CCI IDS

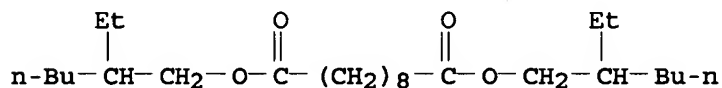


D1-OH

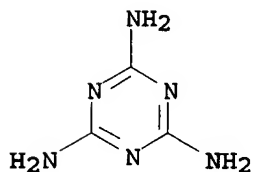
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CRN 50-00-0  
CMF C H2 O



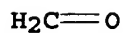
IT 122-62-3  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (long chain dimerate and trimerate ester **adhesion**  
 promoters for improved bonding of sealants to various substrates)  
 RN 122-62-3 HCAPLUS  
 CN Decanedioic acid, bis(2-ethylhexyl) ester (9CI) (CA INDEX NAME)



IT 9003-08-1, Cyrez CRA 138  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (long chain dimerate and trimerate ester **adhesion**  
 promoters for improved bonding of sealants to various substrates)  
 RN 9003-08-1 HCAPLUS  
 CN 1,3,5-Triazine-2,4,6-triamine, polymer with formaldehyde (9CI) (CA  
 INDEX NAME)  
 CM 1  
 CRN 108-78-1  
 CMF C3 H6 N6



CM 2  
 CRN 50-00-0  
 CMF C H2 O



IC ICM C08K005-09  
 INCL 524284000  
 CC 42-11 (Coatings, Inks, and Related Products)  
 Section cross-reference(s): 38  
 ST fatty acid ester **adhesion** promoter bonding sealant  
 substrate

- IT Fatty acids, processes  
 RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)  
 (C18-unsatd., dimers and trimers, **adhesion** promoter precursor; long chain dimerate and trimerate ester **adhesion** promoters for improved bonding of sealants to various substrates)
- IT Epoxy resins, uses  
 Phenolic resins, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (**adhesive**; long chain dimerate and trimerate ester **adhesion** promoters for improved bonding of sealants to various substrates)
- IT Acrylic polymers, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (latex sealant; long chain dimerate and trimerate ester **adhesion** promoters for improved bonding of sealants to various substrates)
- IT **Adhesion promoters**  
**Adhesives**  
 Concrete  
 Sealing compositions  
 (long chain dimerate and trimerate ester **adhesion** promoters for improved bonding of sealants to various substrates)
- IT EPDM rubber  
 Fluoropolymers, miscellaneous  
 Glass, miscellaneous  
 RL: MSC (Miscellaneous)  
 (long chain dimerate and trimerate ester **adhesion** promoters for improved bonding of sealants to various substrates)
- IT Aminoplasts  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (long chain dimerate and trimerate ester **adhesion** promoters for improved bonding of sealants to various substrates)
- IT Fatty acids, uses  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (long-chain, esters; long chain dimerate and trimerate ester **adhesion** promoters for improved bonding of sealants to various substrates)
- IT Polyurethanes, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (polyether-, sealant; long chain dimerate and trimerate ester **adhesion** promoters for improved bonding of sealants to various substrates)
- IT Silicone rubber, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (sealant; long chain dimerate and trimerate ester **adhesion** promoters for improved bonding of sealants to various substrates)
- IT 9003-35-4, Phenol-formaldehyde copolymer  
 24969-11-7, Resorcinol-formaldehyde copolymer 25053-48-9,  
 Butadiene-styrene-2-vinylpyridine  
 copolymer 28410-58-4, Formaldehyde-  
 resorcinol-triallyl cyanurate copolymer  
 39702-51-7, p-Chlorophenol-formaldehyde  
 -resorcinol copolymer 58253-69-3,

**Naphthol-formaldehyde copolymer**

RL: TEM (Technical or engineered material use); USES (Uses)  
 (adhesive; long chain dimerate and trimerate ester  
 adhesion promoters for improved bonding of sealants to  
 various substrates)

IT 122-62-3 640724-45-4, RX-13845 640725-01-5, RX 13928

RL: MOA (Modifier or additive use); USES (Uses)  
 (long chain dimerate and trimerate ester adhesion  
 promoters for improved bonding of sealants to various substrates)

IT 9002-86-2, PVC 24937-79-9, Polyvinylidene fluoride

RL: MSC (Miscellaneous)  
 (long chain dimerate and trimerate ester adhesion  
 promoters for improved bonding of sealants to various substrates)

IT 9003-08-1, Cyrez CRA 138

RL: TEM (Technical or engineered material use); USES (Uses)  
 (long chain dimerate and trimerate ester adhesion  
 promoters for improved bonding of sealants to various substrates)

L42 ANSWER 3 OF 4 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1997:181100 HCAPLUS

DOCUMENT NUMBER: 126:172718

TITLE: Adhesive compositions, bonding films  
 made therefrom and processes for making bonding  
 films

INVENTOR(S): Murray, Cameron T.; Ngo, Dennis C.; Schultz,  
 William J.

PATENT ASSIGNEE(S): Minnesota Mining and Manufacturing Co., USA

SOURCE: PCT Int. Appl., 63 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9700923	A1	19970109	WO 1996-US9412	199606 05
W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN				
CA 2224809	AA	19970109	CA 1996-2224809	199606 05
AU 9660991	A1	19970122	AU 1996-60991	199606 05
EP 833874	A1	19980408	EP 1996-918301	199606 05

R: DE, FR, GB, IT, SE, IE  
 CN 1188501 A 19980722 CN 1996-194955

199606  
 05

JP 11508301 T2 19990721 JP 1996-503861

199606  
 05

PRIORITY APPLN. INFO.:

US 1995-493263 A

199506  
 21

WO 1996-US9412 W

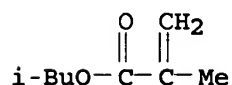
199606  
 05

AB A solvent-free photostable **adhesive** compn. comprises: a) an arom. **polyepoxide**; b) a heat activated curative for **polyepoxide**; c) a **thermoplastic polymer**; d) a polyfunctional (meth)acrylate; and e) optionally, a bireactive compd. that contains at least one (meth)acrylate group and at least one group that is reactive with arom. **polyepoxide**. The **adhesive** compns. can be used to prep. **adhesive** bonding films in a process that uses electron beam irradiation. A compn. contained DER 332, 9,9'-bis(3-chloro-4-aminophenyl)fluorene, PKHJ, bisphenol A diglycidyl ether dimethacrylate, tetraethylene glycol dimethacrylate, and Ebecryl 3605.

IT 97-86-9, Isobutyl methacrylate  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (adhesive compns., bonding films made therefrom and processes for making bonding films)

RN 97-86-9 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-methylpropyl ester (9CI) (CA INDEX NAME)



IC ICM C09J004-02

ICS C09J163-00; C09J007-00

CC 38-3 (Plastics Fabrication and Uses)

ST epoxy resin **adhesive** photostable; thermoplastic epoxy resin **adhesive**; polyfunctional acrylate epoxy resin **adhesive**

IT **Adhesives**

(adhesive compns., bonding films made therefrom and processes for making bonding films)

IT Phenoxy resins

Polycarbonates, uses

Polysulfones, uses

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(adhesive compns., bonding films made therefrom and processes for making bonding films)

- IT Epoxy resins, uses  
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
(arom. epoxy resins; **adhesive** compns., bonding films made therefrom and processes for making bonding films)
- IT **Adhesive** films  
(heat-curable; **adhesive** compns., bonding films made therefrom and processes for making bonding films)
- IT Crosslinking  
(radiochem.; **adhesive** compns., bonding films made therefrom and processes for making bonding films)
- IT Plastics, uses  
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
(thermoplastics; **adhesive** compns., bonding films made therefrom and processes for making bonding films)
- IT 461-58-5, Dicyandiamide  
RL: MOA (Modifier or additive use); USES (Uses)  
(Amicure CG 1400; **adhesive** compns., bonding films made therefrom and processes for making bonding films)
- IT 13048-33-4, 1,6-Hexanediol diacrylate  
RL: MOA (Modifier or additive use); USES (Uses)  
(SR 238; **adhesive** compns., bonding films made therefrom and processes for making bonding films)
- IT 106-91-2, Glycidyl methacrylate  
RL: MOA (Modifier or additive use); USES (Uses)  
(SR 349; **adhesive** compns., bonding films made therefrom and processes for making bonding films)
- IT 10595-06-9, 2-Phenoxyethyl methacrylate  
RL: MOA (Modifier or additive use); USES (Uses)  
(Sartomer 340; **adhesive** compns., bonding films made therefrom and processes for making bonding films)
- IT 97-86-9, Isobutyl methacrylate 106-63-8, Isobutyl acrylate  
109-17-1, Tetraethylene glycol dimethacrylate 1565-94-2, Bisphenol A diglycidyl ether dimethacrylate 2399-48-6, Tetrahydrofurfuryl acrylate 48145-04-6, 2-Phenoxyethyl acrylate 107934-68-9  
119573-74-9, DEH 85 135152-86-2, Ebecryl 3605  
RL: MOA (Modifier or additive use); USES (Uses)  
(**adhesive** compns., bonding films made therefrom and processes for making bonding films)
- IT 9011-14-7, Poly(methyl methacrylate) 25068-38-6, PKHJ  
25085-99-8, DER 332 25135-51-7, Udel P 3500 61128-24-3, Ultem 1000  
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
(**adhesive** compns., bonding films made therefrom and processes for making bonding films)

L42 ANSWER 4 OF 4 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1981:452646 HCAPLUS

DOCUMENT NUMBER: 95:52646

TITLE: Lithographic printing plate by electrophotography

INVENTOR(S): Osawa, Sadao; Taguchi, Seiichi; Honjo, Satoru

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Ger. Offen., 60 pp.

DOCUMENT TYPE: CODEN: GWXXBX  
 LANGUAGE: Patent  
 FAMILY ACC. NUM. COUNT: German  
 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3021165	A1	19801211	DE 1980-3021165	198006 04
GB 2053091	A	19810204	GB 1980-18353	198006 04
GB 2053091	B2	19830316		
US 4357404	A	19821102	US 1980-156307	198006 04
PRIORITY APPLN. INFO.:			JP 1979-69662	A 197906 04

AB High quality lithog. plates having an extended printing life are produced by using an electrophotog. material consisting of a water-resistant support carrying a photoconductive insulating layer contg. ZnO and a thermoplastic insulating resin. The electrophotog. material is elec. charged, imagewise exposed, developed with a liq. developer contg. oleophilic toner particles dispersed in an insulating carrier liq., and then heated under such conditions as that when an adhesive tape with an adhesivity of 280-350 g/10 mm width (detd. by the 180°-peel-process according to JIS C2107) attached to the toner layer and then passed through pressure rollers at 50 mm/s, then passed through between 2 metal rollers at 20° ± 2, and finally passed through rubber pressure rollers at 6000 g is stripped off after 1 min at 500 mm/min and 180°, not more than 30 wt.% of the toner image is stripped off.

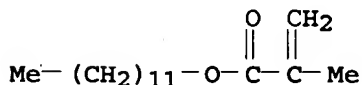
IT 142-90-5D, polymers with cyclized rubber 688-84-6D  
 , polymers with cyclized rubber 28062-60-4

RL: USES (Uses)

(electrophotog. developers contg., for high quality lithog. plate prodn.)

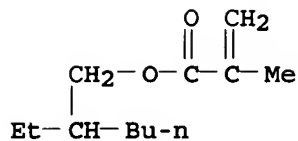
RN 142-90-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, dodecyl ester (9CI) (CA INDEX NAME)



RN 688-84-6 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-ethylhexyl ester (9CI) (CA INDEX NAME)



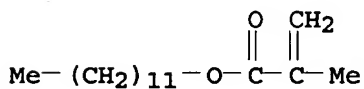
RN 28062-60-4 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, dodecyl ester, polymer with 2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 142-90-5

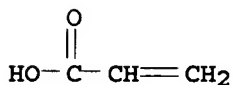
CMF C16 H30 O2



CM 2

CRN 79-10-7

CMF C3 H4 O2



IT 9003-08-1

RL: USES (Uses)

(electrophotog. paper with water-resistant layer contg., for high quality lithog. plate prodn.)

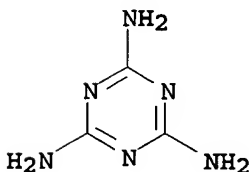
RN 9003-08-1 HCAPLUS

CN 1,3,5-Triazine-2,4,6-triamine, polymer with formaldehyde (9CI) (CA INDEX NAME)

CM 1

CRN 108-78-1

CMF C3 H6 N6



CM 2

CRN 50-00-0

CMF C H2 O

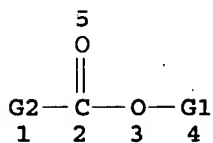
 $H_2C=O$ 

- IC G03G013-28; G03G013-10  
CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic Processes)  
ST lithog plate electrophotog  
IT Rubber, cyclized  
RL: USES (Uses)  
(acrylate-modified, electrophotog. developers contg., for high quality lithog. plate prodn.)  
IT Carbon black, uses and miscellaneous  
RL: USES (Uses)  
(electrophotog. developers contg., for high quality lithog. plate prodn.)  
IT Kaolin, uses and miscellaneous  
Polyesters, uses and miscellaneous  
RL: USES (Uses)  
(electrophotog. material with photoconductive layer contg. zinc oxide and, for high quality lithog. plate fabrication)  
IT Acrylic polymers, uses and miscellaneous  
RL: USES (Uses)  
(electrophotog. photoconductive layers contg. zinc oxide and, for high quality lithog. fabrication)  
IT Soybean oil  
RL: USES (Uses)  
(epoxy resin modified by, electrophotog. material with photoconductive layer contg. zinc oxide and, for high quality lithog. plate fabrication)  
IT Photography, electro-, development  
(in high quality lithog. plate prodn.)  
IT Rubber, cyclized  
RL: USES (Uses)  
(lauryl methacrylate-modified, electrophotog. developers contg., for high quality lithog. plate prodn.)  
IT Epoxy resins, uses and miscellaneous  
RL: USES (Uses)  
(soybean oil-modified, electrophotog. materials with photoconductive layer contg. zinc oxide and, for high lithog. plate prodn.)  
IT Photography, electro-, plates  
(with photoconductive layer contg. zinc oxide and thermoplastic resin for high quality lithog. plate fabrication)  
IT Photography, electro-, paper  
(with photoconductive layer contg. zinc oxide and thermoplastic resin for high quality lithog. plate prodn.)

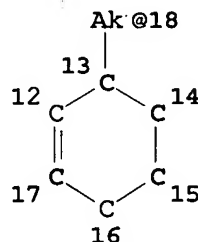
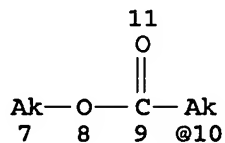
IT Lithographic plates  
 (electrophotog., with extended printing life, prodn. of)  
 IT 9003-55-8 57917-30-3  
 RL: USES (Uses)  
 (electrophotog. contg., for high quality lithog. plate prodn.)  
 IT 112-80-1D, reaction products with nigrosine abietate  
 142-90-5D, polymers with cyclized rubber 688-84-6D  
 , polymers with cyclized rubber 28062-60-4 37248-23-0D,  
 reaction products with oleic acid  
 RL: USES (Uses)  
 (electrophotog. developers contg., for high quality lithog. plate  
 prodn.)  
 IT 25232-40-0  
 RL: USES (Uses)  
 (electrophotog. material with electroconductive layer contg., for  
 high quality lithog. plate prodn.)  
 IT 11121-48-5 78122-31-3 78355-66-5  
 RL: USES (Uses)  
 (electrophotog. material with photoconductive layer contg. zinc  
 oxide and, for high quality lithog. plate fabrication)  
 IT 9003-08-1  
 RL: USES (Uses)  
 (electrophotog. paper with water-resistant layer contg., for high  
 quality lithog. plate prodn.)  
 IT 52953-78-3  
 RL: USES (Uses)  
 (electrophotog. photoconductive layers contg. zinc oxide and, for  
 high quality lithog. fabrication)

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L1 STR



Ak @6



Ak @26

VAR G1=H/26

VAR G2=6/10/18

NODE ATTRIBUTES:

CONNECT IS E1 RC AT 6

CONNECT IS E1 RC AT 7

CONNECT IS E1 RC AT 26  
DEFAULT MLEVEL IS ATOM  
DEFAULT ECLEVEL IS LIMITED  
ECOUNT IS M3-X24 C AT 6  
ECOUNT IS M3-X24 C AT 7  
ECOUNT IS M3-X24 C AT 10  
ECOUNT IS M3-X24 C AT 18  
ECOUNT IS M3-X24 C AT 26

GRAPH ATTRIBUTES:  
RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 19

STEREO ATTRIBUTES: NONE

L2 SCR 1992  
L3 SCR 2005  
L4 SCR 1199  
L5 SCR 2016  
L6 SCR 2032  
L7 SCR 1968  
L8 SCR 2026  
L9 32210 SEA FILE=REGISTRY SSS FUL L1 AND L3 AND L4 NOT (L2 OR L5  
OR L6 OR L7 OR L8)  
L13 1 SEA FILE=REGISTRY ("RESORCINOL-FORMALDEHYDE CONDENSATE"/C  
N OR "RESORCINOL-FORMALDEHYDE COPOLYMER"/CN OR "RESORCINO  
L-FORMALDEHYDE POLYMER"/CN OR "RESORCINOL-FORMALDEHYDE  
RESIN"/CN)  
L28 61218 SEA FILE=HCAPLUS L9  
L33 3424 SEA FILE=HCAPLUS L13 OR RESORCINOL(W) FORMALDEHYDE  
L39 149 SEA FILE=HCAPLUS THERMOPLASTIC(A) (POLYMER? OR RESIN#)  
AND (ADHESI? OR ADHERE?) AND L28  
L43 2 SEA FILE=HCAPLUS L39 AND L33

*Resorcinol-formaldehyde*

=> d l43 ibib abs hitstr ind 1-2)

L43 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:534005 HCAPLUS

DOCUMENT NUMBER: 141:89930

TITLE: Adhesion promoters for cord-reinforced  
thermoplastics and substrate/thermoplastic  
composites

INVENTOR(S): Wentworth, Gary; Chen, Zhi; Semlow, Stephen; *Applicant*  
O'Rourke, Stephen; Stefanisin, Kimberly L.;  
English, John

PATENT ASSIGNEE(S): The C.P. Hall Company, USA

SOURCE: U.S. Pat. Appl. Publ., 22 pp., Cont.-in-part of  
U.S. Ser. No. 434,616.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

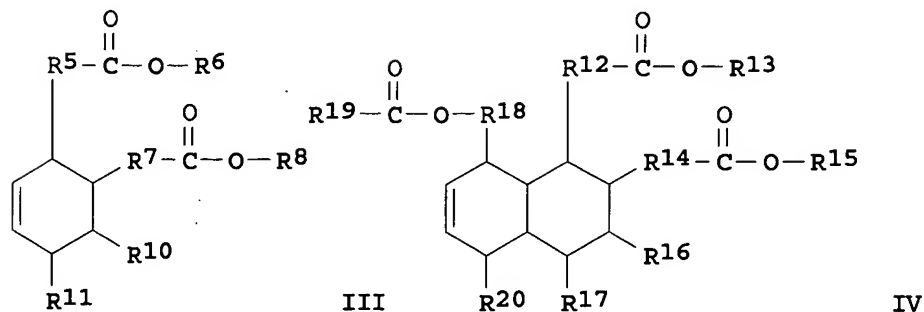
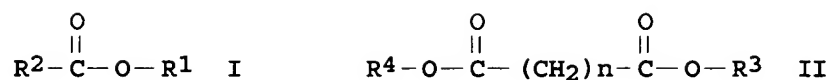
FAMILY ACC. NUM. COUNT: 8

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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----- US 2004127615	A1	20040701	US 2003-706196	200311 12
US 2003220426	A1	20031127	US 2002-144229	200205 10
US 6884832	B2	20050426		
US 2003220427	A1	20031127	US 2002-301770	200211 21
US 2004002563	A1	20040101	US 2003-434616	200305 09
US 6858664	B2	20050222		
US 2004002564	A1	20040101	US 2003-435212	200305 09
PRIORITY APPLN. INFO.:			US 2002-144229	A2 200205 10
			US 2002-301770	A2 200211 21
			US 2003-434616	A2 200305 09
			US 2003-435212	A2 200305 09

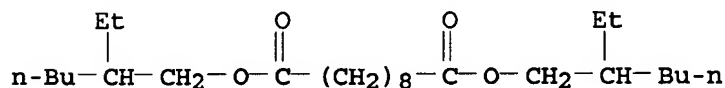
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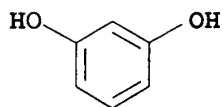
AB A thermoplastic polymeric material compn.

comprising a thermoplastic polymeric material selected from the group consisting of thermoplastic polymers, thermoplastic polymer alloys, and combinations thereof, and an adhesion promotor contg. (1) an adhesive resin in an amt. of about 0.1% to about 15% by wt., based on the wt. of the thermoplastic polymeric material in the compn.; and (2) a long chain ester, particularly dimerate and trimerate esters, in an amt. of about 0.1% to about 15% by wt., based on the wt. of the thermoplastic polymeric material in the compn., is capable of unexpected adhesion to substrates such as natural fabric substrates, synthetic polymeric fabric substrates, metal substrates, and thermoplastic polymeric material substrates, particularly natural cords, synthetic polymeric cords, metal cords, and glass cords for use in cord-reinforced articles such as hoses, conveyor belts, transmission belts, and the like. The esters used in the adhesion promoter have formula I, II, III, IV or a combination of any two or more of said esters, wherein R1, R3, R4, R6, R8, R13, R15 and R19, same or different, are a C3-C24 alkyl radical, straight chain or branched, satd. or unsatd. contg. 1 to 3 carbon-to-carbon double bonds; R2 is a C3-C24 satd. fatty acid residue, or an unsatd. fatty acid residue having 1 to 6 carbon-to-carbon double bonds; n=3-24; R5, R7, R12, R14, R18, same or different, are a C3-C24 hydrocarbon chain, straight chain or branched, either satd. or having 1 to 6 carbon-to-carbon double bonds; R10, R11, R16, R17 and R20, same or different, are a C3-C24, satd. hydrocarbon chain, straight chain or branched; or an unsatd. C3-C24, hydrocarbon chain, straight chain or branched, having 1 to 6, carbon-to-carbon double bonds.

IT 122-62-3  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (adhesion promoter; adhesion promoters for  
 cord-reinforced thermoplastics and substrate/thermoplastic  
 composites)  
 RN 122-62-3 HCAPLUS  
 CN Decanedioic acid, bis(2-ethylhexyl) ester (9CI) (CA INDEX NAME)



IT 24969-11-7, Resorcinol formaldehyde  
 copolymer  
 RL: POF (Polymer in formulation); TEM (Technical or engineered  
 material use); USES (Uses)  
 (adhesion promoters for cord-reinforced thermoplastics  
 and substrate/thermoplastic composites)  
 RN 24969-11-7 HCAPLUS  
 CN Formaldehyde, polymer with 1,3-benzenediol (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 108-46-3  
 CMF C6 H6 O2



CM 2

CRN 50-00-0

CMF C H2 O

 $\text{H}_2\text{C}=\text{O}$ 

IC ICM C08K005-09

INCL 524284000

CC 37-6 (Plastics Manufacture and Processing)

ST **adhesion** promoter cord reinforced thermoplastic; dimerate ester long chain **adhesion** promoter; trimerate ester long chain **adhesion** promoter

IT Fatty acids, uses

RL: MOA (Modifier or additive use); USES (Uses)  
(C18-unsatd., dimers and trimers, 2-ethylhexyl esters, **adhesion** promoter; **adhesion** promoters for cord-reinforced thermoplastics and substrate/thermoplastic composites)

IT Aminoplasts

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
(N-oxymethyl deriv.; **adhesion** promoters for cord-reinforced thermoplastics and substrate/thermoplastic composites)

IT Urethane rubber, uses

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
(TDI-based; **adhesion** promoters for cord-reinforced thermoplastics and substrate/thermoplastic composites)

IT Fatty acids, uses

RL: MOA (Modifier or additive use); USES (Uses)  
(**adhesion** promoter; **adhesion** promoters for cord-reinforced thermoplastics and substrate/thermoplastic composites)IT **Adhesion** promotersComposites  
Conveyor belts  
Hoses

(adhesion promoters for cord-reinforced thermoplastics and substrate/thermoplastic composites)

IT Epoxy resins, uses

Phenolic resins, uses

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

- (adhesion promoters for cord-reinforced thermoplastics and substrate/thermoplastic composites)
- IT Glass, uses  
Metals, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(cord; adhesion promoters for cord-reinforced thermoplastics and substrate/thermoplastic composites)
- IT Fatty acids, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(dimer acids, C18, reaction products with a C3-C24 alc., adhesion promoter; adhesion promoters for cord-reinforced thermoplastics and substrate/thermoplastic composites)
- IT Polyurethanes, uses  
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
(polyester-; adhesion promoters for cord-reinforced thermoplastics and substrate/thermoplastic composites)
- IT Reinforced plastics  
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
(thermoplastics, cord-reinforced; adhesion promoters for cord-reinforced thermoplastics and substrate/thermoplastic composites)
- IT Belts  
(transmission; adhesion promoters for cord-reinforced thermoplastics and substrate/thermoplastic composites)
- IT 9002-86-2, Geon 121  
RL: PCF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
(OxyVinyls 240F; adhesion promoters for cord-reinforced thermoplastics and substrate/thermoplastic composites)
- IT 111-20-6D, Sebacic acid, reaction products with a C6-C24 alc.  
122-62-3 67290-26-0D, reaction products with a C3-C24 alc.  
639479-06-4D, reaction products with a C3-C24 alc. 639479-07-5D, reaction products with a C3-C24 alc. 639479-08-6D, reaction products with a C3-C24 alc. 640724-45-4, RX-13845 640725-01-5, RX-13928 713516-57-5, RX 13946 713516-96-2, RX 13939 713516-98-4, RX 13943 713517-22-7, RX 13977 713517-75-0, RX 13978  
RL: MOA (Modifier or additive use); USES (Uses)  
(adhesion promoter; adhesion promoters for cord-reinforced thermoplastics and substrate/thermoplastic composites)
- IT 104-76-7, 2-Ethylhexyl alcohol  
RL: NUU (Other use, unclassified); USES (Uses)  
(adhesion promoters for cord-reinforced thermoplastics and substrate/thermoplastic composites)
- IT 9003-08-1D, Melamine formaldehyde copolymer, N-oxyethyl deriv.  
9003-35-4, Phenol-formaldehyde copolymer 24969-11-7, Resorcinol formaldehyde copolymer 25053-48-9, Styrene, butadiene, 2-vinylpyridine copolymer 28410-58-4, Formaldehyde-resorcinol-triallyl cyanurate copolymer 39702-51-7, p-Chlorophenol, resorcinol, formaldehyde copolymer 58253-69-3, Formaldehyde Naphthol copolymer  
RL: POF (Polymer in formulation); TEM (Technical or engineered

material use); USES (Uses)  
(adhesion promoters for cord-reinforced thermoplastics  
and substrate/thermoplastic composites)

IT 1344-95-2, Calcium silicate

RL: TEM (Technical or engineered material use); USES (Uses)  
(inert carrier; adhesion promoters for cord-reinforced  
thermoplastics and substrate/thermoplastic composites)

L43 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:513365 HCAPLUS

DOCUMENT NUMBER: 141:73078

TITLE: Adhesion promoters of long chain  
esters for sealants and sealant compositions  
INVENTOR(S): Klosowski, Jerome M.; Wentworth, Gary; Chen,  
Zhi; Semlow, Stephen; O'Rourke, Stephen;  
Stefanisin, Kimberly L.; English, John

PATENT ASSIGNEE(S): The C.P. Hall Company, USA

SOURCE: U.S. Pat. Appl. Publ., 22 pp., Cont.-in-part of  
U.S. Pat. Appl. 2004 2,563.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 8

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004122145	A1	20040624	US 2003-718233	20031119
US 2003220426	A1	20031127	US 2002-144229	20020510
US 6884832	B2	20050426		
US 2003220427	A1	20031127	US 2002-301770	20021121
US 2004002563	A1	20040101	US 2003-434616	20030509
US 6858664	B2	20050222		
US 2004002564	A1	20040101	US 2003-435212	20030509
US 2005194752	A1	20050908	US 2004-18790	20041220
PRIORITY APPLN. INFO.:			US 2002-144229	A2 20020510
			US 2002-301770	A2 20021121

*Applicant*

US 2003-434616 A2 20030509  
US 2003-435212 A2 20030509  
US 2003-718233 A2 20031119

AB A sealant compn. comprises a sealant, an adhesive resin, and a long chain ester, particularly dimerate and trimerate esters, capable of unexpected adhesion to substrates such as ceramic substrates (e.g., concrete), glass substrates, metal substrates such as metal flat stock materials, elastic substrates including substrates comprising natural and/or synthetic rubbers, and substrates comprising thermoplastic polymeric materials, particularly for use in sealing around bathroom fixtures, in storage areas, vents, plumbing lines, flooring, wheel wells, and the like. For example, an adhesion promoter system utilizing a dry carrier, RX-13845, was prepd. by adding preheated Cyrez CRA 138 resin liq. to a dry carrier (Ca silicate) contained in a mixing bowl, followed by addn. of preheated RX-13804, a representative long chain ester.

IT 24969-11-7, Resorcinol-formaldehyde copolymer

RL: TEM (Technical or engineered material use); USES (Uses) (adhesive; long chain dimerate and trimerate ester adhesion promoters for improved bonding of sealants to various substrates)

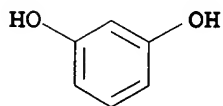
RN 24969-11-7 HCAPLUS

CN Formaldehyde, polymer with 1,3-benzenediol (9CI) (CA INDEX NAME)

CM 1

CRN 108-46-3

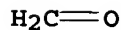
CMF C6 H6 O2



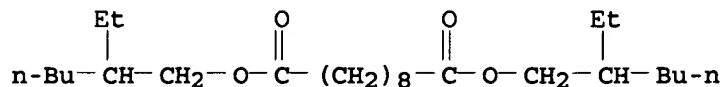
CM 2

CRN 50-00-0

CMF C H2 O



IT 122-62-3  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (long chain dimerate and trimerate ester **adhesion**  
 promoters for improved bonding of sealants to various substrates)  
 RN 122-62-3 HCAPLUS  
 CN Decanedioic acid, bis(2-ethylhexyl) ester (9CI) (CA INDEX NAME)



IC ICM C08K005-09  
 INCL 524284000  
 CC 42-11 (Coatings, Inks, and Related Products)  
 Section cross-reference(s): 38  
 ST fatty acid ester **adhesion** promoter bonding sealant  
 substrate  
 IT Fatty acids, processes  
 RL: CPS (Chemical process); PEP (Physical, engineering or chemical  
 process); PROC (Process)  
 (C18-unsatd., dimers and trimers, **adhesion** promoter  
 precursor; long chain dimerate and trimerate ester  
**adhesion** promoters for improved bonding of sealants to  
 various substrates)  
 IT Epoxy resins, uses  
 Phenolic resins, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (**adhesive**; long chain dimerate and trimerate ester  
**adhesion** promoters for improved bonding of sealants to  
 various substrates)  
 IT Acrylic polymers, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (latex sealant; long chain dimerate and trimerate ester  
**adhesion** promoters for improved bonding of sealants to  
 various substrates)  
 IT **Adhesion** promoters  
**Adhesives**  
 Concrete  
 Sealing compositions  
 (long chain dimerate and trimerate ester **adhesion**  
 promoters for improved bonding of sealants to various substrates)  
 IT EPDM rubber  
 Fluoropolymers, miscellaneous  
 Glass, miscellaneous  
 RL: MSC (Miscellaneous)  
 (long chain dimerate and trimerate ester **adhesion**  
 promoters for improved bonding of sealants to various substrates)  
 IT Aminoplasts  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (long chain dimerate and trimerate ester **adhesion**  
 promoters for improved bonding of sealants to various substrates)  
 IT Fatty acids, uses  
 RL: MOA (Modifier or additive use); USES (Uses)

(long-chain, esters; long chain dimerate and trimerate ester  
adhesion promoters for improved bonding of sealants to  
various substrates)

IT Polyurethanes, uses

RL: TEM (Technical or engineered material use); USES (Uses)  
(polyether-, sealant; long chain dimerate and trimerate ester  
adhesion promoters for improved bonding of sealants to  
various substrates)

IT Silicone rubber, uses

RL: TEM (Technical or engineered material use); USES (Uses)  
(sealant; long chain dimerate and trimerate ester  
adhesion promoters for improved bonding of sealants to  
various substrates)

IT 9003-35-4, Phenol-formaldehyde copolymer 24969-11-7,

Resorcinol-formaldehyde copolymer 25053-48-9,

Butadiene-styrene-2-vinylpyridine copolymer 28410-58-4,

Formaldehyde-resorcinol-triallyl cyanurate copolymer 39702-51-7,

p-Chlorophenol-formaldehyde-resorcinol copolymer 58253-69-3,

Naphthol-formaldehyde copolymer

RL: TEM (Technical or engineered material use); USES (Uses)  
(adhesive; long chain dimerate and trimerate ester  
adhesion promoters for improved bonding of sealants to  
various substrates)

IT 122-62-3 640724-45-4, RX-13845 640725-01-5, RX 13928

RL: MOA (Modifier or additive use); USES (Uses)

(long chain dimerate and trimerate ester adhesion  
promoters for improved bonding of sealants to various substrates)

IT 9002-86-2, PVC 24937-79-9, Polyvinylidene fluoride

RL: MSC (Miscellaneous)

(long chain dimerate and trimerate ester adhesion  
promoters for improved bonding of sealants to various substrates)

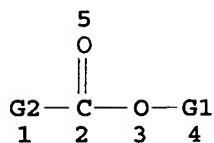
IT 9003-08-1, Cyrez CRA 138

RL: TEM (Technical or engineered material use); USES (Uses)

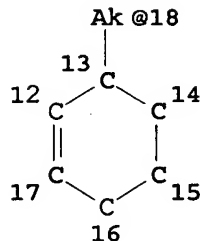
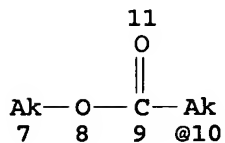
(long chain dimerate and trimerate ester adhesion  
promoters for improved bonding of sealants to various substrates)

=> d 163 que stat

L1 STR



Ak @6



Ak @26

VAR G1=H/26

VAR G2=6/10/18

NODE ATTRIBUTES:

CONNECT IS E1 RC AT 6

CONNECT IS E1 RC AT 7

CONNECT IS E1 RC AT 26

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

ECOUNT IS M3-X24 C AT 6

ECOUNT IS M3-X24 C AT 7

ECOUNT IS M3-X24 C AT 10

ECOUNT IS M3-X24 C AT 18

ECOUNT IS M3-X24 C AT 26

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 19

STEREO ATTRIBUTES: NONE

L2 SCR 1992

L3 SCR 2005

L4 SCR 1199

L5 SCR 2016

L6 SCR 2032

L7 SCR 1968

L8 SCR 2026

L9 32210 SEA FILE=REGISTRY SSS FUL L1 AND L3 AND L4 NOT (L2 OR L5 OR L6 OR L7 OR L8)

L28 61218 SEA FILE=HCAPLUS L9

L39 149 SEA FILE=HCAPLUS THERMOPLASTIC(A) (POLYMER? OR RESIN#) AND (ADHESI? OR ADHERE?) AND L28

L44 154205 SEA FILE=REGISTRY 46.492.16/RID

L46 103670 SEA FILE=HCAPLUS L44

L63 5 SEA FILE=HCAPLUS L39 AND L46

=&gt; d 163 ibib abs hitstr ind 1-5

L63 ANSWER 1 OF 5 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:534005 HCAPLUS

DOCUMENT NUMBER: 141:89930

TITLE: Adhesion promoters for cord-reinforced thermoplastics and substrate/thermoplastic composites

INVENTOR(S): Wentworth, Gary; Chen, Zhi; Semlow, Stephen; O'Rourke, Stephen; Stefanisin, Kimberly L.; English, John

PATENT ASSIGNEE(S): The C.P. Hall Company, USA

SOURCE: U.S. Pat. Appl. Publ., 22 pp., Cont.-in-part of U.S. Ser. No. 434,616.

CODEN: USXXCO

DOCUMENT TYPE: Patent

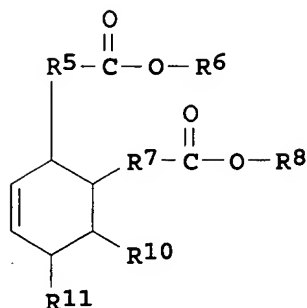
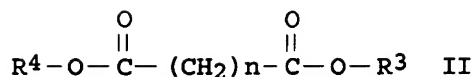
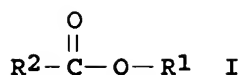
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 8

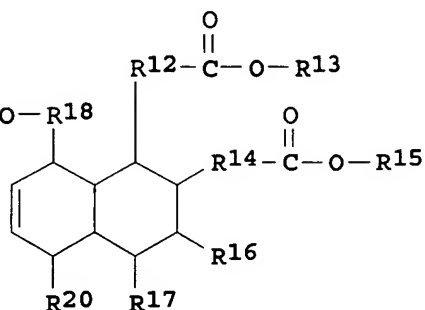
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004127615	A1	20040701	US 2003-706196	20031112
US 2003220426	A1	20031127	US 2002-144229	20020510
US 6884832	B2	20050426		
US 2003220427	A1	20031127	US 2002-301770	20021121
US 2004002563	A1	20040101	US 2003-434616	20030509
US 6858664	B2	20050222		
US 2004002564	A1	20040101	US 2003-435212	20030509
PRIORITY APPLN. INFO.:			US 2002-144229	A2 20020510
			US 2002-301770	A2 20021121
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			US 2003-435212	A2 20030509

GI



III



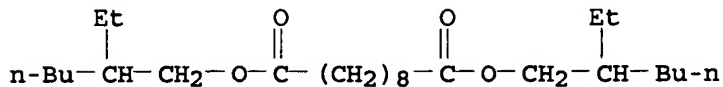
IV

AB A thermoplastic polymeric material compn. comprising a thermoplastic polymeric material selected from the group consisting of thermoplastic polymers, thermoplastic polymer alloys, and combinations thereof, and an adhesion promoter contg. (1) an adhesive resin in an amt. of about 0.1% to about 15% by wt., based on the wt. of the thermoplastic polymeric material in the compn.; and (2) a long chain ester, particularly dimerate and trimerate esters, in an amt. of about 0.1% to about 15% by wt., based on the wt. of the thermoplastic polymeric material in the compn., is capable of unexpected adhesion to substrates such as natural fabric substrates, synthetic polymeric fabric substrates, metal substrates, and thermoplastic polymeric material substrates, particularly natural cords, synthetic polymeric cords, metal cords, and glass cords for use in cord-reinforced articles such as hoses, conveyor belts, transmission belts, and the like. The esters used in the adhesion promoter have formula I, II, III, IV or a combination of any two or more of said esters, wherein R<sup>1</sup>, R<sup>3</sup>, R<sup>4</sup>, R<sup>6</sup>, R<sup>8</sup>, R<sup>13</sup>, R<sup>15</sup> and R<sup>19</sup>, same or different, are a C<sup>3</sup>-C<sup>24</sup> alkyl radical, straight chain or branched, satd. or unsatd. contg. 1 to 3 carbon-to-carbon double bonds; R<sup>2</sup> is a C<sup>3</sup>-C<sup>24</sup> satd. fatty acid residue, or an unsatd. fatty acid residue having 1 to 6 carbon-to-carbon double bonds; n=3-24; R<sup>5</sup>, R<sup>7</sup>, R<sup>12</sup>, R<sup>14</sup>, R<sup>18</sup>, same or different, are a C<sup>3</sup>-C<sup>24</sup> hydrocarbon chain, straight chain or branched, either satd. or having 1 to 6 carbon-to-carbon double bonds; R<sup>10</sup>, R<sup>11</sup>, R<sup>16</sup>, R<sup>17</sup> and R<sup>20</sup>, same or different, are a C<sup>3</sup>-C<sup>24</sup>, satd. hydrocarbon chain, straight chain or branched; or an unsatd. C<sup>3</sup>-C<sup>24</sup>, hydrocarbon chain, straight chain or branched, having 1 to 6, carbon-to-carbon double bonds.

IT 122-62-3

RL: MOA (Modifier or additive use); USES (Uses)  
(adhesion promoter; adhesion promoters for  
cord-reinforced thermoplastics and substrate/thermoplastic  
composites)

RN 122-62-3 HCAPLUS  
 CN Decanedioic acid, bis(2-ethylhexyl) ester (9CI) (CA INDEX NAME)

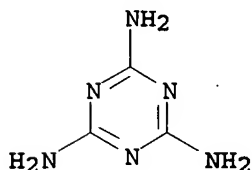


IT 9003-08-1D, Melamine formaldehyde copolymer, N-oxymethyl deriv. 28410-58-4, Formaldehyde-resorcinol-triallyl cyanurate copolymer  
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
 (adhesion promoters for cord-reinforced thermoplastics and substrate/thermoplastic composites)

RN 9003-08-1 HCAPLUS  
 CN 1,3,5-Triazine-2,4,6-triamine, polymer with formaldehyde (9CI) (CA INDEX NAME)

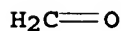
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CRN 108-78-1  
 CMF C3 H6 N6



CM 2

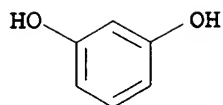
CRN 50-00-0  
 CMF C H2 O



RN 28410-58-4 HCAPLUS  
 CN Formaldehyde, polymer with 1,3-benzenediol and 2,4,6-tris(2-propenyloxy)-1,3,5-triazine (9CI) (CA INDEX NAME)

CM 1

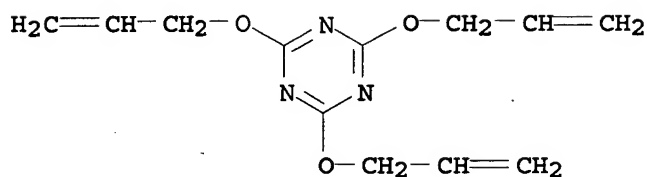
CRN 108-46-3  
 CMF C6 H6 O2



CM 2

CRN 101-37-1

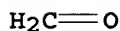
CMF C12 H15 N3 O3



CM 3

CRN 50-00-0

CMF C H2 O



IC ICM C08K005-09

INCL 524284000

CC 37-6 (Plastics Manufacture and Processing)

ST **adhesion** promoter cord reinforced thermoplastic; dimerate ester long chain **adhesion** promoter; trimerate ester long chain **adhesion** promoter

IT Fatty acids, uses

RL: MOA (Modifier or additive use); USES (Uses)

(C18-unsatd., dimers and trimers, 2-ethylhexyl esters,

**adhesion** promoter; **adhesion** promoters for

cord-reinforced thermoplastics and substrate/thermoplastic composites)

IT Aminoplasts

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(N-oxymethyl deriv.; **adhesion** promoters for

cord-reinforced thermoplastics and substrate/thermoplastic composites)

IT Urethane rubber, uses

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(TDI-based; **adhesion** promoters for cord-reinforced

thermoplastics and substrate/thermoplastic composites)

IT Fatty acids, uses

RL: MOA (Modifier or additive use); USES (Uses)  
 (adhesion promoter; adhesion promoters for  
 cord-reinforced thermoplastics and substrate/thermoplastic  
 composites)

IT Adhesion promoters  
 Composites  
 Conveyor belts  
 Hoses  
 (adhesion promoters for cord-reinforced thermoplastics  
 and substrate/thermoplastic composites)

IT Epoxy resins, uses  
 Phenolic resins, uses  
 RL: POF (Polymer in formulation); TEM (Technical or engineered  
 material use); USES (Uses)  
 (adhesion promoters for cord-reinforced thermoplastics  
 and substrate/thermoplastic composites)

IT Glass, uses  
 Metals, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (cord; adhesion promoters for cord-reinforced  
 thermoplastics and substrate/thermoplastic composites)

IT Fatty acids, uses  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (dimer acids, C18, reaction products with a C3-C24 alc.,  
 adhesion promoter; adhesion promoters for  
 cord-reinforced thermoplastics and substrate/thermoplastic  
 composites)

IT Polyurethanes, uses  
 RL: POF (Polymer in formulation); TEM (Technical or engineered  
 material use); USES (Uses)  
 (polyester-; adhesion promoters for cord-reinforced  
 thermoplastics and substrate/thermoplastic composites)

IT Reinforced plastics  
 RL: POF (Polymer in formulation); TEM (Technical or engineered  
 material use); USES (Uses)  
 (thermoplastics, cord-reinforced; adhesion promoters  
 for cord-reinforced thermoplastics and substrate/thermoplastic  
 composites)

IT Belts  
 (transmission; adhesion promoters for cord-reinforced  
 thermoplastics and substrate/thermoplastic composites)

IT 9002-86-2, Geon 121  
 RL: POF (Polymer in formulation); TEM (Technical or engineered  
 material use); USES (Uses)  
 (OxyVinyls 240F; adhesion promoters for cord-reinforced  
 thermoplastics and substrate/thermoplastic composites)

IT 111-20-6D, Sebacic acid, reaction products with a C6-C24 alc.  
 122-62-3 67290-26-0D, reaction products with a C3-C24 alc.  
 639479-06-4D, reaction products with a C3-C24 alc. 639479-07-5D,  
 reaction products with a C3-C24 alc. 639479-08-6D, reaction  
 products with a C3-C24 alc. 640724-45-4, RX-13845 640725-01-5,  
 RX-13928 713516-57-5, RX 13946 713516-96-2, RX 13939  
 713516-98-4, RX 13943 713517-22-7, RX 13977 713517-75-0, RX  
 13978  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (adhesion promoter; adhesion promoters for

cord-reinforced thermoplastics and substrate/thermoplastic composites)

- IT 104-76-7, 2-Ethylhexyl alcohol  
RL: NUU (Other use, unclassified); USES (Uses)  
(adhesion promoters for cord-reinforced thermoplastics and substrate/thermoplastic composites)
- IT 9003-08-1D, Melamine formaldehyde copolymer, N-oxymethyl deriv. 9003-35-4, Phenol-formaldehyde copolymer 24969-11-7, Resorcinol formaldehyde copolymer 25053-48-9, Styrene, butadiene, 2-vinylpyridine copolymer 28410-58-4, Formaldehyde-resorcinol-triallyl cyanurate copolymer 39702-51-7, p-Chlorophenol, resorcinol, formaldehyde copolymer 58253-69-3, Formaldehyde Naphthol copolymer  
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
(adhesion promoters for cord-reinforced thermoplastics and substrate/thermoplastic composites)
- IT 1344-95-2, Calcium silicate  
RL: TEM (Technical or engineered material use); USES (Uses)  
(inert carrier; adhesion promoters for cord-reinforced thermoplastics and substrate/thermoplastic composites)

L63 ANSWER 2 OF 5 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:513365 HCAPLUS

DOCUMENT NUMBER: 141:73078

TITLE: Adhesion promoters of long chain esters for sealants and sealant compositions  
INVENTOR(S): Klosowski, Jerome M.; Wentworth, Gary; Chen, Zhi; Semlow, Stephen; O'Rourke, Stephen; Stefanisin, Kimberly L.; English, John

PATENT ASSIGNEE(S): The C.P. Hall Company, USA

SOURCE: U.S. Pat. Appl. Publ., 22 pp., Cont.-in-part of U.S. Pat. Appl. 2004 2,563.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 8

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004122145	A1	20040624	US 2003-718233	20031119
US 2003220426	A1	20031127	US 2002-144229	20020510
US 6884832	B2	20050426		
US 2003220427	A1	20031127	US 2002-301770	20021121
US 2004002563	A1	20040101	US 2003-434616	20030509
US 6858664	B2	20050222		

*\$ applicant*

US 2004002564	A1	20040101	US 2003-435212	20030509
US 2005194752	A1	20050908	US 2004-18790	20041220
PRIORITY APPLN. INFO.:			US 2002-144229	A2 20020510
			US 2002-301770	A2 20021121
			US 2003-434616	A2 20030509
			US 2003-435212	A2 20030509
			US 2003-718233	A2 20031119

AB A sealant compn. comprises a sealant, an **adhesive** resin, and a long chain ester, particularly dimerate and trimerate esters, capable of unexpected **adhesion** to substrates such as ceramic substrates (e.g., concrete), glass substrates, metal substrates such as metal flat stock materials, elastic substrates including substrates comprising natural and/or synthetic rubbers, and substrates comprising **thermoplastic polymeric** materials, particularly for use in sealing around bathroom fixtures, in storage areas, vents, plumbing lines, flooring, wheel wells, and the like. For example, an **adhesion** promoter system utilizing a dry carrier, RX-13845, was prepd. by adding preheated Cyrez CRA 138 resin liq. to a dry carrier (Ca silicate) contained in a mixing bowl, followed by addn. of preheated RX-13804, a representative long chain ester.

IT 28410-58-4, Formaldehyde-resorcinol-triallyl cyanurate copolymer

RL: TEM (Technical or engineered material use); USES (Uses) (adhesive; long chain dimerate and trimerate ester **adhesion** promoters for improved bonding of sealants to various substrates)

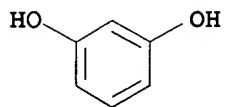
RN 28410-58-4 HCAPLUS

CN Formaldehyde, polymer with 1,3-benzenediol and 2,4,6-tris(2-propenyloxy)-1,3,5-triazine (9CI) (CA INDEX NAME)

CM 1

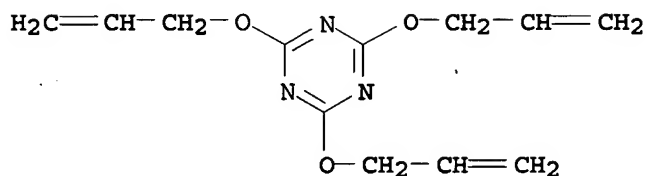
CRN 108-46-3

CMF C6 H6 O2



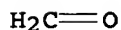
CM 2

CRN 101-37-1  
CMF C12 H15 N3 O3



CM 3

CRN 50-00-0  
CMF C H2 O

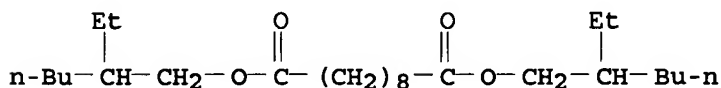


IT 122-62-3

RL: MOA (Modifier or additive use); USES (Uses)  
(long chain dimerate and trimerate ester **adhesion**  
promoters for improved bonding of sealants to various substrates)

RN 122-62-3 HCAPLUS

CN Decanedioic acid, bis(2-ethylhexyl) ester (9CI) (CA INDEX NAME)



IT 9003-08-1, Cyrez CRA 138

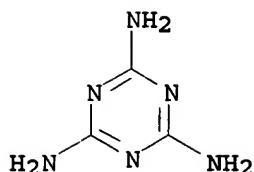
RL: TEM (Technical or engineered material use); USES (Uses)  
(long chain dimerate and trimerate ester **adhesion**  
promoters for improved bonding of sealants to various substrates)

RN 9003-08-1 HCAPLUS

CN 1,3,5-Triazine-2,4,6-triamine, polymer with formaldehyde (9CI) (CA INDEX NAME)

CM 1

CRN 108-78-1  
CMF C3 H6 N6



CM 2

CRN 50-00-0

CMF C H2 O

 $\text{H}_2\text{C}=\text{O}$ 

IC ICM C08K005-09

INCL 524284000

CC 42-11 (Coatings, Inks, and Related Products)

Section cross-reference(s): 38

ST fatty acid ester **adhesion** promoter bonding sealant substrate

IT Fatty acids, processes

RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)

(C18-unsatd., dimers and trimers, **adhesion** promoter precursor; long chain dimerate and trimerate ester **adhesion** promoters for improved bonding of sealants to various substrates)

IT Epoxy resins, uses

Phenolic resins, uses

RL: TEM (Technical or engineered material use); USES (Uses) (**adhesive**; long chain dimerate and trimerate ester **adhesion** promoters for improved bonding of sealants to various substrates)

IT Acrylic polymers, uses

RL: TEM (Technical or engineered material use); USES (Uses) (latex sealant; long chain dimerate and trimerate ester **adhesion** promoters for improved bonding of sealants to various substrates)IT **Adhesion** promoters**Adhesives**

Concrete

Sealing compositions

(long chain dimerate and trimerate ester **adhesion** promoters for improved bonding of sealants to various substrates)

IT EPDM rubber

Fluoropolymers, miscellaneous

Glass, miscellaneous

RL: MSC (Miscellaneous)

(long chain dimerate and trimerate ester **adhesion** promoters for improved bonding of sealants to various substrates)

- IT Aminoplasts  
RL: TEM (Technical or engineered material use); USES (Uses)  
(long chain dimerate and trimerate ester **adhesion**  
promoters for improved bonding of sealants to various substrates)
- IT Fatty acids, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(long-chain, esters; long chain dimerate and trimerate ester  
**adhesion** promoters for improved bonding of sealants to  
various substrates)
- IT Polyurethanes, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(polyether-, sealant; long chain dimerate and trimerate ester  
**adhesion** promoters for improved bonding of sealants to  
various substrates)
- IT Silicone rubber, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(sealant; long chain dimerate and trimerate ester  
**adhesion** promoters for improved bonding of sealants to  
various substrates)
- IT 9003-35-4, Phenol-formaldehyde copolymer 24969-11-7,  
Resorcinol-formaldehyde copolymer 25053-48-9, Butadiene-styrene-2-  
vinylpyridine copolymer 28410-58-4, Formaldehyde-  
resorcinol-triallyl cyanurate copolymer 39702-51-7,  
p-Chlorophenol-formaldehyde-resorcinol copolymer 58253-69-3,  
Naphthol-formaldehyde copolymer  
RL: TEM (Technical or engineered material use); USES (Uses)  
(**adhesive**; long chain dimerate and trimerate ester  
**adhesion** promoters for improved bonding of sealants to  
various substrates)
- IT 122-62-3 640724-45-4, RX-13845 640725-01-5, RX 13928  
RL: MOA (Modifier or additive use); USES (Uses)  
(long chain dimerate and trimerate ester **adhesion**  
promoters for improved bonding of sealants to various substrates)
- IT 9002-86-2, PVC 24937-79-9, Polyvinylidene fluoride  
RL: MSC (Miscellaneous)  
(long chain dimerate and trimerate ester **adhesion**  
promoters for improved bonding of sealants to various substrates)
- IT 9003-08-1, Cyrez CRA 138  
RL: TEM (Technical or engineered material use); USES (Uses)  
(long chain dimerate and trimerate ester **adhesion**  
promoters for improved bonding of sealants to various substrates)

L63 ANSWER 3 OF 5 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1990:506446 HCAPLUS  
DOCUMENT NUMBER: 113:106446  
TITLE: Photopolymerizable compositions for production  
of printing plates and photoresists  
INVENTOR(S): Fujikura, Sadao; Iwasaki, Masayuki; Maeda,  
Minoru; Wada, Minoru  
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
SOURCE: Ger. Offen., 13 pp.  
CODEN: GWXXBX  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3926667	A1	19900215	DE 1989-3926667	19890811
JP 02048664	A2	19900219	JP 1988-200605	19880811
JP 08020733	B4	19960304		
US 5030548	A	19910709	US 1989-391819	19890810
PRIORITY APPLN. INFO.:				JP 1988-200605 A 19880811

AB Photopolymerizable compns. for the prodn. of lithog. plates, copying press printing plates, photoresists, and the like are composed of a thermoplastic polymer binder, a nongas-forming ethylenically unsatd. compd., a photopolymn. initiator system consisting of 4,4'-bis(dialkylamino)benzophenone, an arom. ketone, and a lophine dimer, an org. halogen compd., and a leuco dye. Thus, a photopolymerizable compn. contg. a benzyl methacrylate-2-ethylhexyl methacrylate-methacrylic acid-Me methacrylate copolymer, propylene glycol diacrylate, tetraethylene glycol dimethacrylate, p-toluenesulfonamide, malachite green oxalate, 4,4'-bis(diethylamino)benzophenone, 2-(2'-chlorophenyl)imidazole dimer, benzophenone, Ph bis(trichloromethyl)-s-triazine, and leucocrystal violet was used to produce a resist pattern having excellent resolu., adhesion, sensitivity, and no tenting.

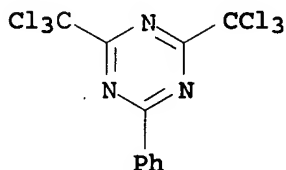
IT 24504-22-1 123961-51-3

RL: USES (Uses)

(photopolymerizable compns. contg., for photoresists and printing plate prodn.)

RN 24504-22-1 HCAPLUS

CN 1,3,5-Triazine, 2-phenyl-4,6-bis(trichloromethyl)- (9CI) (CA INDEX NAME)

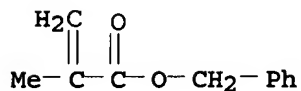


RN 123961-51-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with 2-ethylhexyl 2-methyl-2-propenoate, methyl 2-methyl-2-propenoate and phenylmethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

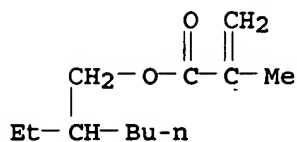
CM 1

CRN 2495-37-6  
CMF C11 H12 O2



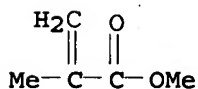
CM 2

CRN 688-84-6  
CMF C12 H22 O2



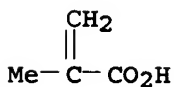
CM 3

CRN 80-62-6  
CMF C5 H8 O2



CM 4

CRN 79-41-4  
CMF C4 H6 O2



IC ICM G03F007-004  
ICS C08F002-50

ICA G03F007-035; G03F007-09; G03F007-11

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST photopolymerizable compn printing plate photoresist; lithog plate  
prodn photopolymerizable compn

IT Lithographic plates  
Printing plates

(photopolymerizable compns. for prodn. of)

IT Resists  
(photo-, photopolymerizable compns. for prodn. of)

IT Photoimaging compositions and processes  
(relief, photopolymerizable compns. as)

IT 90-93-7 109-17-1 119-61-9, Benzophenone, uses and miscellaneous  
603-48-5 1707-68-2 2437-29-8, Malachite green oxalate  
17025-47-7, Phenyl tribromomethyl sulfone 24504-22-1  
24650-42-8 25151-33-1, Propylene glycol diacrylate  
123961-51-3 129024-85-7  
RL: USES (Uses)  
(photopolymerizable compns. contg., for photoresists and printing  
plate prodn.)

L63 ANSWER 4 OF 5 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1981:452646 HCAPLUS

DOCUMENT NUMBER: 95:52646

TITLE: Lithographic printing plate by  
electrophotography

INVENTOR(S): Osawa, Sadao; Taguchi, Seiichi; Honjo, Satoru

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Ger. Offen., 60 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
DE 3021165	A1	19801211	DE 1980-3021165	198006 04
GB 2053091	A	19810204	GB 1980-18353	198006 04
GB 2053091	B2	19830316		
US 4357404	A	19821102	US 1980-156307	198006 04
PRIORITY APPLN. INFO.:		JP 1979-69662	A	197906 04

AB High quality lithog. plates having an extended printing life are produced by using an electrophotog. material consisting of a water-resistant support carrying a photoconductive insulating layer contg. ZnO and a thermoplastic insulating resin. The electrophotog. material is elec. charged, imagewise exposed, developed with a liq. developer contg. oleophilic toner particles dispersed in an insulating carrier liq., and then heated under such conditions as that when an adhesive tape with an adhesivity of 280-350 g/10 mm width (detd. by the 180°-peel-process according to JIS C2107) attached to the toner layer and then passed through pressure rollers at 50 mm/s, then passed through between 2

metal rollers at  $20^{\circ} \pm 2$ , and finally passed through rubber pressure rollers at 6000 g is stripped off after 1 min at 500 mm/min and  $180^{\circ}$ , not more than 30 wt.% of the toner image is stripped off.

IT 142-90-5D, polymers with cyclized rubber 688-84-6D

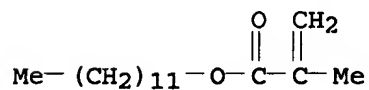
, polymers with cyclized rubber 28062-60-4

RL: USES (Uses)

(electrophotog. developers contg., for high quality lithog. plate prodn.)

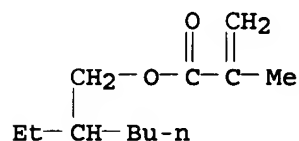
RN 142-90-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, dodecyl ester (9CI) (CA INDEX NAME)



RN 688-84-6 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-ethylhexyl ester (9CI) (CA INDEX NAME)



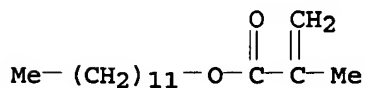
RN 28062-60-4 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, dodecyl ester, polymer with 2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 142-90-5

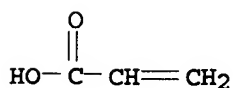
CMF C16 H30 O2



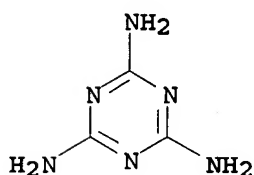
CM 2

CRN 79-10-7

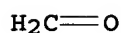
CMF C3 H4 O2



IT 9003-08-1  
 RL: USES (Uses)  
 (electrophotog. paper with water-resistant layer contg., for high  
 quality lithog. plate prodn.)  
 RN 9003-08-1 HCAPLUS  
 CN 1,3,5-Triazine-2,4,6-triamine, polymer with formaldehyde (9CI) (CA  
 INDEX NAME)  
 CM 1  
 CRN 108-78-1  
 CMF C3 H6 N6



CM 2  
 CRN 50-00-0  
 CMF C H2 O



IC G03G013-28; G03G013-10  
 CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic  
 Processes)  
 ST lithog plate electrophotog  
 IT Rubber, cyclized  
 RL: USES (Uses)  
 (acrylate-modified, electrophotog. developers contg., for high  
 quality lithog. plate prodn.)  
 IT Carbon black, uses and miscellaneous  
 RL: USES (Uses)  
 (electrophotog. developers contg., for high quality lithog. plate  
 prodn.)  
 IT Kaolin, uses and miscellaneous  
 Polyesters, uses and miscellaneous  
 RL: USES (Uses)  
 (electrophotog. material with photoconductive layer contg. zinc  
 oxide and, for high quality lithog. plate fabrication)  
 IT Acrylic polymers, uses and miscellaneous  
 RL: USES (Uses)  
 (electrophotog. photoconductive layers contg. zinc oxide and, for  
 high quality lithog. fabrication)  
 IT Soybean oil  
 RL: USES (Uses)

- (epoxy resin modified by, electrophotog. material with photoconductive layer contg. zinc oxide and, for high quality lithog. plate fabrication)
- IT Photography, electro-, development  
(in high quality lithog. plate prodn.)
- IT Rubber, cyclized  
RL: USES (Uses)  
(lauryl methacrylate-modified, electrophotog. developers contg., for high quality lithog. plate prodn.)
- IT Epoxy resins, uses and miscellaneous  
RL: USES (Uses)  
(soybean oil-modified, electrophotog. materials with photoconductive layer contg. zinc oxide and, for high lithog. plate prodn.)
- IT Photography, electro-, plates  
(with photoconductive layer contg. zinc oxide and thermoplastic resin for high quality lithog. plate fabrication)
- IT Photography, electro-, paper  
(with photoconductive layer contg. zinc oxide and thermoplastic resin for high quality lithog. plate prodn.)
- IT Lithographic plates  
(electrophotog., with extended printing life, prodn. of)
- IT 9003-55-8 57917-30-3  
RL: USES (Uses)  
(electrophotog. contg., for high quality lithog. plate prodn.)
- IT 112-80-1D, reaction products with nigrosine abietate  
142-90-5D, polymers with cyclized rubber 688-84-6D  
, polymers with cyclized rubber 28062-60-4 37248-23-0D,  
reaction products with oleic acid  
RL: USES (Uses)  
(electrophotog. developers contg., for high quality lithog. plate prodn.)
- IT 25232-40-0  
RL: USES (Uses)  
(electrophotog. material with electroconductive layer contg., for high quality lithog. plate prodn.)
- IT 11121-48-5 78122-31-3 78355-66-5  
RL: USES (Uses)  
(electrophotog. material with photoconductive layer contg. zinc oxide and, for high quality lithog. plate fabrication)
- IT 9003-08-1  
RL: USES (Uses)  
(electrophotog. paper with water-resistant layer contg., for high quality lithog. plate prodn.)
- IT 52953-78-3  
RL: USES (Uses)  
(electrophotog. photoconductive layers contg. zinc oxide and, for high quality lithog. fabrication)

L63 ANSWER 5 OF 5 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1972:155034 HCAPLUS  
DOCUMENT NUMBER: 76:155034  
TITLE: Making laminated sheet products  
INVENTOR(S): Bader, Erich; Koert, Hubert

PATENT ASSIGNEE(S): Deutsche Gold- und Silber-Scheideanstalt vorm.  
Roessler  
SOURCE: U.S., 9 pp.  
CODEN: USXXAM  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 2  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	---	-----	-----	
US 3639191	A	19720201	US 1969-844670	196907 24
DE 1703887	A	19720406	DE 1967-1703887	196807 25
DE 1909035	A	19700910	DE 1969-1909035	196902 22
NL 6907775	A	19700127	NL 1969-7775	196905 21
FR 2013640	A5	19700403	FR 1969-17816	196905 30
BR 6910456	A0	19730201	BR 1969-210456	196907 04
GB 1269516	A	19720406	GB 1969-1269516	196907 16
CH 488544	A	19700415	CH 1969-488544	196907 17
CH 537262	A	19730713	CH 1969-10909	196907 17
BE 736551	A	19691231	BE 1969-736551	196907 24
AT 298081	B	19720425	AT 1969-7161	196907 24
AT 298082	B	19720425	AT 1969-7164	196907 24
US 3759774	A	19730918	US 1971-170271	197108 09
PRIORITY APPLN. INFO.:			DE 1967-1703887	A 196807 25
			DE 1969-1909035	A

196902  
22

US 1969-844670 A

196907  
24

AB Decorative, weather resistant laminates with high gloss surfaces were prep'd. from porous wood, pressboard or asbestos board by impregnating the absorptive substrate with a liq. polymerizable compn., covering the surface with a powd. thermoplastic polymer, and laminating sheets together, or with coating veneers, by heating under pressure. Adhesives were not used and woods contg. polymn. inhibitors were successfully laminated. Veneers of limba 0.6, gabun 2 and walnut 0.5 mm thick weighing 30.2g. were impregnated with 28.8g of a mixt. of methylmethacrylate [80-62-6] 50, poly(methylmethacrylate) [9011-14-7] viscosity 3200 cP at 20.deg. 50, 50% lauryl peroxide paste 1, and 52% diacetyl peroxide soln. 1 part under atm. and reduced pressure. The limba and walnut veneers were coated with 10.2g butyl acrylate-methyl methacrylate copolymer [25852-37-3] pearls, particle diam. 0.1-0.5 mm. and placed as facings on the gabun veneer. After lamination at 120.deg. and 50 kg/cm2 for 10 min. fracture occurred in the wood in delamination attempts. Substrates were also impregnated with vinyl chloride-vinyl acetate copolymer [9003-22-9] or polystyrene (I) [9003-53-6], and I was used as the pearl coating.

IT 77-90-7 96-05-9 101-37-1

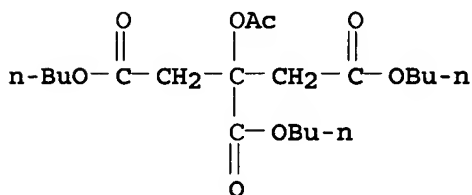
688-84-6 26519-58-4

RL: USES (Uses)

(in impregnation liqs. for absorbent laminate substrates)

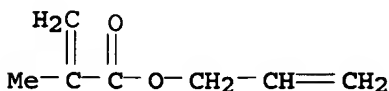
RN 77-90-7 HCAPLUS

CN 1,2,3-Propanetricarboxylic acid, 2-(acetyloxy)-, tributyl ester (9CI) (CA INDEX NAME)



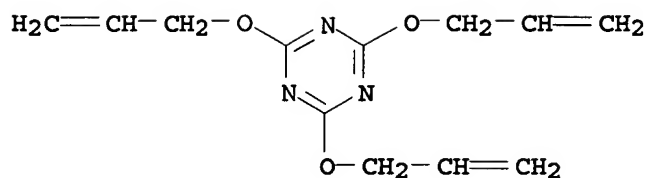
RN 96-05-9 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-propenyl ester (9CI) (CA INDEX NAME)



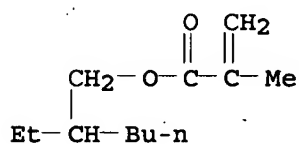
RN 101-37-1 HCAPLUS

CN 1,3,5-Triazine, 2,4,6-tris(2-propenyloxy)- (9CI) (CA INDEX NAME)



RN 688-84-6 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-ethylhexyl ester (9CI) (CA INDEX NAME)



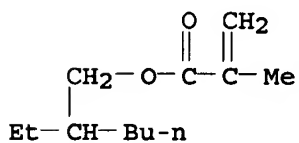
RN 26519-58-4 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-ethylhexyl ester, polymer with methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 688-84-6

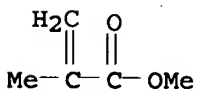
CMF C12 H22 O2



CM 2

CRN 80-62-6

CMF C5 H8 O2



IC B32B

INCL 156284000

CC 37 (Plastics Fabrication and Uses)

Section cross-reference(s): 43

ST wood laminate; fiberboard laminate; asbestos laminate;

polymethacrylate impregnation wood laminate; polystyrene impregnation wood laminate; polyvinyl chloride impregnation laminate; weather resistance wood laminate; gloss wood laminate; **adhesion** wood laminate

IT Building materials  
 (fiberboard, lamination of acrylic polymer-impregnated swollen polymer pearl-coated, with wood veneers)

IT Laminated products  
 (from absorbent substrates impregnated with acrylic polymers and coated with swollen polymer pearls)

IT Acrylic polymers  
 RL: USES (Uses)  
 (in impregnation liqs. for absorbent laminate substrates)

IT Wood  
 (laminates, with absorbent acrylic polymer impregnated interlayers coated with swollen polymer pearls)

IT Paperboard  
 Asbestos  
 RL: USES (Uses)  
 (lamination of acrylic polymer-impregnated swollen polymer pearl-coated)

IT Lamination  
 (of absorbent substrates impregnated with acrylic polymers and coated with swollen polymer pearls, with wood veneers)

IT 77-90-7 80-62-6 96-05-9 97-63-2 97-90-5  
 100-42-5, uses and miscellaneous 101-37-1 109-16-0  
 123-81-9 688-84-6 9003-22-9 9011-14-7 12651-30-8  
 25768-50-7 26519-58-4  
 RL: USES (Uses)  
 (in impregnation liqs. for absorbent laminate substrates)

IT 9003-53-6 25852-37-3  
 RL: USES (Uses)  
 (pearls, swollen surface coatings of, on acrylic polymer-impregnated absorbent laminate interlayers)

=&gt;